

Resisting Obsolescence:  
Polaroid Practices in the 'Digital Age'

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## **Declaration**

I, Andrea Lathrop Ligueros, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

## ABSTRACT

### Resisting Obsolescence: Polaroid Practice in the 'Digital Age'

This thesis looks at today's Polaroid practice in order to explore questions of the materiality of media, its agency, and the possibilities of media technologies to challenge and resist processes of obsolescence. By approaching Polaroid from a perspective that encompasses the material and social realm of the practice, and drawing on a 12-month networked ethnography that focused on the online and offline sites the practice inhabits, this thesis looks at the social, material, and cultural meanings of Polaroid in relation to other photographic practices today.

Through the analysis of online digital platforms, mainly Polaroid dedicated Facebook groups, and the offline sites where members of Polaroid-centred communities gather (London and Vienna), this thesis explores the way Polaroid as a practice is produced, consumed and circulated. In addition, this research seeks to contribute to the understanding of media technologies not only as transmitters of content but also as enablers of sociality, in a context in which this sociality (and by extension, materiality) is fundamental for the infrastructural maintenance of the practice.

By reading Polaroid media technology in terms of both continuity and transformation, and tradition and innovation, this thesis proposes three main arguments. (1) Analogue and digital photographic practices do not stand in opposition to one another but in a *supplementary* relationship in which each practice informs the other. (2) It is through *residual practices* and the building of an informal infrastructure that so-called obsolete technologies can continue to intersect the present and challenge assumptions of technological progress. (3) Obsolescence is a mutable, variable category that is not necessarily related to the material dimensions of the media object, but to ideological discourses that see progress through material culture.

## IMPACT STATEMENT

As new and innovative media technologies continue to be produced at an unprecedented pace, previous ones that are considered to be less technologically ‘advanced’ end up in landfills. Regardless of the nature of the innovation, there seems to be a prevalent assumption that ‘the new’ always implies a ‘betterment’, and that this is the pathway towards progress. In the last couple of decades, it has become evident that obsolescence produced by the arrival of the new is more concerned with economic return than with actual innovation. Processes of planned obsolescence have evidenced that the life expectancy of technologies is not dependent on the material capacities of said technology but on futurological tropes in which technology appears to be an end in itself. These perspectives, however, have proven to be highly problematic. In a world in which climate change and waste play such a fundamental role, understanding the ideological conception of the ‘obsolete’, people’s expectations towards technologies, and how the assumption that progress can only be achieved through technology, becomes of extreme urgency. My research aims to look at so-called obsolete technologies and the way they continue to linger and intersect current digital practices in order to shed light to people’s expectations and perceptions in relation to older and newer technologies. By offering an ethnographic perspective on these subjects, I expect my research to provide a thought-provoking account that demonstrates that the future does not only contain ‘the digital’ and that older technologies continue to permeate our technological environment. That said, this research is located in an interdisciplinary intersection. It speaks from a material anthropological perspective, yet aims to dialogue with the fields of technology and media studies, as well as cultural studies, by providing a compelling account about the perception of progress through technology.

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>ABSTRACT</b>   | <b>3</b>  |
| <b>IMPACT STATEMENT</b>   | <b>4</b>  |
| <b>TABLE OF CONTENTS</b>  | <b>5</b>  |
| <b>ACKNOWLEDGEMENTS</b>   | <b>8</b>  |
| <b>PROLOGUE: POLAROID ON THE HIGH STREET</b>                      | <b>10</b> |
| <b>INTRODUCTION: MEDIA ANTHROPOLOGY AND THE STUDY OF POLAROID</b> | <b>13</b> |
| <b>ANTHROPOLOGY AND THE STUDY OF PHOTOGRAPHY</b>                  | <b>13</b> |
| <b>MEDIA OBSOLESCENCE AND THE MYTH OF NEW MEDIA</b>               | <b>18</b> |
| <b>THE NEW AND THE OLD</b>  | <b>20</b> |
| THE AGENCY OF MEDIA   | 23        |
| THE PERSISTENCE OF MEDIA  | 25        |
| <b>ONE-STEP PHOTOGRAPHY: A LITTLE HISTORY OF POLAROID</b>         | <b>27</b> |
| THE GAME-CHANGER  | 29        |
| THE MASS MARKET   | 32        |
| THE BEGINNING OF THE END  | 34        |
| THE IMPOSSIBLE PROJECT  | 36        |
| POLAROID ORIGINALS  | 39        |
| <b>METHODOLOGY AND FIELDWORK</b>                                  | <b>41</b> |
| <b>METHODS</b>  | <b>41</b> |
| <b>FIELDWORK</b>  | <b>43</b> |
| <b>THE DATA</b>   | <b>47</b> |
| <b>THESIS OUTLINE</b>   | <b>49</b> |
| <b>CHAPTER ONE: OBJECTS OF SOCIALITY</b>                          | <b>52</b> |
| <b>I. THE LONDON POLAROID COMMUNITY</b>                           | <b>54</b> |
| THE SCS FACEBOOK GROUP  | 55        |
| POLAROID WALKS  | 57        |
| POLAROID PRACTITIONERS  | 59        |
| <b>II. POLAROID DOT COM</b>                                       | <b>64</b> |
| MEDIATED COMMUNITIES  | 65        |
| ONLINE ACTIVISM   | 68        |
| <b>III. PERFORMING FANDOM</b>                                     | <b>71</b> |
| EVERY DAY AND RESISTANCE FANDOM                                   | 74        |
| <b>CONCLUSION: SOCIAL MEDIA</b>                                   | <b>76</b> |

|  |            |
|--|------------|
| <b>CHAPTER TWO: OBJECTS OF THE BODY</b>                    | <b>79</b>  |
| I. MATERIALS AND SOCIALITY                                 | 81         |
| 13 LAYERS OF FILM COMPLEXITY                               | 83         |
| CHROME AND PLASTIC CAMERAS                                 | 85         |
| THE NEW OLD  | 88         |
| <b>II. BODY AND MEDIATION</b>                              | <b>90</b>  |
| MAKING PHOTOGRAPHY   | 92         |
| BATTLING THE ‘UNREAL’                                      | 94         |
| <b>III. THE BECOMING OF THE IMAGE</b>                      | <b>96</b>  |
| PHOTO ACTION   | 97         |
| AURA OF THE PROCESSUAL                                     | 100        |
| <b>CONCLUSION: POLAROID’S PLASTICITY</b>                   | <b>101</b> |
| <br>   |            |
| <b>CHAPTER THREE: OBJECTS OF BECOMING</b>                  | <b>103</b> |
| <br>   |            |
| <b>I. DIGITAL TO ANALOGUE CONVERSIONS</b>                  | <b>107</b> |
| DIGITAL ‘IMMORTALITY’                                      | 109        |
| BACK-UP STRATEGIES   | 113        |
| <b>II. BECOMING ANALOGUE</b>                               | <b>115</b> |
| ANALOGUE INTERFERENCE                                      | 117        |
| THE VALUE OF ANALOGUE                                      | 118        |
| ENGRAVED REALITY   | 120        |
| <b>III. INTEGRATIVE MEDIA</b>                              | <b>124</b> |
| LOGIC OF THE SUPPLEMENT                                    | 126        |
| OPPOSITION AND INTEGRATION                                 | 129        |
| <b>CONCLUSION: PULLING THE ANALOGUE AND DIGITAL CLOSER</b> | <b>130</b> |
| <br>   |            |
| <b>CHAPTER FOUR: OBJECTS OF OBSOLESCENCE</b>               | <b>132</b> |
| <br>   |            |
| <b>I. FACING OBSOLESCENCE. TWO CASE STUDIES OF AFFECT.</b> | <b>134</b> |
| MARY AND THE MEDIUM FORMAT POLAROID                        | 134        |
| THE FP100C PACK FILM GLOBAL COMMUNITY                      | 136        |
| AFFECT AND PRESERVATION                                    | 139        |
| <b>II. CONTESTING OBSOLESCENCE.</b>                        | <b>141</b> |
| THE CONSTRUCTION OF RUBBISH                                | 141        |
| THE REACTIVATION OF RUBBISH                                | 143        |
| THE STABILIZATION OF RUBBISH                               | 145        |
| <b>III. THE VALUE OF POLAROID</b>                          | <b>147</b> |
| NOSTALGIA  | 148        |
| THE ANTI-PERFECTION DRIVE                                  | 148        |
| THE ANTIQUE FETISH   | 151        |
| <b>CONCLUSION: POLAROID’S FUTURE</b>                       | <b>155</b> |
| <br>   |            |
| <b>CHAPTER FIVE: OBJECTS OF INFRASTRUCTURE</b>             | <b>157</b> |
| <br>   |            |
| <b>I. THE BREAKDOWN OF THE POLAROID CORPORATION</b>        | <b>159</b> |
| CHANGING HANDS   | 159        |
| VISUALIZING INFRASTRUCTURE                                 | 160        |
| INFORMAL NETWORKS OF SOCIABILITY                           | 162        |

|  |            |
|--|------------|
| <b>II. THE PRODUCTIVITY OF BREAKDOWN</b>         | <b>166</b> |
| IMPROVISATION AND INNOVATION                     | 168        |
| CAPITALIZING ERRORS                              | 172        |
| <b>III. THE CIRCULATION OF POLAROID PRACTICE</b> | <b>174</b> |
| MOVING CAMERAS                                   | 176        |
| MOVING KNOWLEDGE/S                               | 178        |
| <b>CONCLUSION: PRACTITIONERS' INFRASTRUCTURE</b> | <b>181</b> |
| <br>   |            |
| <b>CHAPTER SIX: OBJECTS OF TEMPORALITY</b>       | <b>183</b> |
| <br>   |            |
| <b>I. MEDIA AMNESIA</b>                          | <b>186</b> |
| MATERIAL CULTURE AND PROGRESS                    | 188        |
| MATTER OUT OF TIME                               | 190        |
| <b>II. THEORIZING TIME</b>                       | <b>192</b> |
| THE ANTHROPOLOGY OF TIME                         | 193        |
| DEEP TIME OF MEDIA                               | 195        |
| MEDIA HISTORICITY                                | 197        |
| <b>III. UNFOLDING TIME</b>                       | <b>199</b> |
| MULTIPLE TEMPORALITIES                           | 200        |
| TEMPORAL DISJUNCTURE                             | 202        |
| <i>UNCONTEMPORANEITY</i> OF POLAROID             | 204        |
| <b>CONCLUSION: POLAROID'S TIME</b>               | <b>205</b> |
| <br>   |            |
| <b>CONCLUSION</b>                                | <b>207</b> |
| <br>   |            |
| <b>EPILOGUE</b>                                  | <b>208</b> |
| <br>   |            |
| <b>REFERENCES</b>                                | <b>213</b> |
| <br>   |            |
| <b>APPENDIX 1</b>                                | <b>232</b> |
| <br>   |            |
| <b>FIELDWORK SITES</b>                           | <b>232</b> |
| SUPERSENSE                                       | 232        |
| SELFRIDGES                                       | 236        |
| <br>   |            |
| <b>APPENDIX 2</b>                                | <b>237</b> |

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## PROLOGUE: POLAROID ON THE HIGH STREET

*The new is always old; and the old continuously new.*

Blanqui, 1872

On a pre-Christmas winter evening of 2014, I was walking through a busy road in central London when, at the shopfront of a small photographic shop, I saw a Polaroid camera with some film next to it being offered for sale. Though I had never been into Polaroid photography myself – my family never owned such a camera – I did remember going to certain social events, such as Christmas parties, birthdays or visiting a famous landmark, where Polaroid photographs were being taken and later gifted or sold as souvenirs, memorializing the events of that day. I remembered the white iconic frame and the excitement of seeing the image develop in front of one's eyes. But more importantly, I remember taking them home, holding them tightly with both of my hands and displaying them somewhere in my room for everyone to see. So, when I saw that bulky, square, plastic camera for sale, it made me wonder what was so special about Polaroid that the cameras and film, to my surprise, continued to be sold more than 20 years on, and why people were willing to continue to use them, regardless of the developments in digital photography.

A few months after the sighting, I went online to purchase my first Polaroid camera. The one that I chose was a Polaroid 1000 camera with a red button and rainbow colours on the front, arguably one of Polaroid's most iconic cameras and one of the first to use the white frame film that made Polaroid so well-known globally. The eBay ad stated, *Vintage Polaroid 1000 Camera Red Button Working*. When I contacted the seller to inquire about the condition of the camera, she told me, "Sorry, no expert either, this was my father's pride and joy." This small interaction not only highlighted the importance the 1970s camera had for a specific individual, but also shed light on the places 'old<sup>2</sup>' analogue media inhabit and circulate today.

Following the purchase of my first Polaroid camera, my next step was to go and look for the film. After some online research, I came to realize that although Polaroid cameras were being sold mostly as antiques or objects destined to be displayed on mantle pieces, and hence were presumed to be obsolete, there was still a company producing the film. This company was called *The Impossible Project*, a name which emphasized the extent of the

<sup>2</sup> Although I do not agree with the old/new binarism through which technology is normally rationalized, in this thesis I use the word 'old' to exemplify the overall way Polaroid or other analogue technologies are addressed in everyday media.

endeavour of securing the continuation of Polaroid practice in a context where new media technologies are constantly being hailed as a break and replacement from those of the past.

Soon, however, I came to realize that keeping Polaroid practice going was not a simple task. The machines bought from the last Polaroid remaining factory were not made to run in low-scale production, and the chemicals needed were no longer available due to a combination of factors: the destruction of the last Polaroid chemical factory in the USA during hurricane Katrina, and stricter EU chemical regulations. This lack of resources proved problematic not only for sourcing the necessary materials (chemicals, emulsifiers, cameras, et cetera) in an era in which these were not readily available anymore, but also for accessing the much-needed expertise to run the whole technological operation. The step that followed in my Polaroid endeavour and that would allow me to use my newly acquired Polaroid camera was to learn how to operate it. Contrary to the original Polaroid Corporation's film technology, which was stable and instant, *The Impossible Project* film was unstable and, in its best moments, experimental. This was evident when I purchased my first film from Amazon, which strangely enough was extraordinarily cheap (though at that moment I didn't know why!) but had very mixed reviews. For some buyers, the film was "brilliant", yet for others it was "disappointing" or simply "awful". These mixed reviews evidenced the fact that Polaroid practice today was being perceived as a continuation of the original Polaroid Corporation's photographic media, complete with expectations for the technology to behave in the same way as it used to, something that was not possible anymore.

Even so, what I learned from this brief retail experience was that if I wanted to benefit from my camera and the film, which, albeit on discount, continued to be expensive when compared to 35 mm photography or its 'free' next of kin, digital photography, I needed to do some research and look for some advice. This search led me to *Polanoid.net*<sup>3</sup>, "the biggest Polaroid-picture-collection on the planet to celebrate the magic of instant photography". Although it was not a step-by-step website that taught people how to use their cameras, it did allow me to see other people's photographs (and the cameras by which they were shot), evidencing the potentialities of mine, and the photographic community that was built around the practice. Since that day, I have been a member of *Polanoid.net* and I have occasionally uploaded Polaroid pictures there, an activity that ultimately allowed me to get to know other practitioners, both online and offline, some of whom eventually became my interlocutors and friends.

<sup>3</sup> *Polanoid.net*, created in 2004 by Florian Kaps and Andreas Holler, is a Polaroid oriented photographic online community in which people, aka *polanoiders*, upload pictures and exchange messages.

Since that particular day in London in 2014, my interest in Polaroid has remained, and my collection of cameras and my relationship with the community has grown. What started as small interactions on *Polaroid.net* (the uploading of images and a few exchanges with other users) expanded into other social media platforms, such as Facebook, which allowed me to establish more personal interactions, getting to know and be part of both the global and local Polaroid communities. Similarly, what started with one single camera bought on eBay turned into an ever-expanding activity of searching for other models. Some of my cameras were gifted by family and other Polaroid friends, while others were purchased or won in online biddings; and although they are from different eras – 60s, 70s, 80s and 90s –, use different types of film, and require different techniques to operate, they are all linked by an ongoing persistence against becoming obsolete and a capacity to continue operating, despite the market's intention to deem them ruins.

That said, the continuation of Polaroid has proven to be volatile to say the least. At the time of writing, one of my cameras has already encountered a grim fate. Fujifilm, the company that produced pack film for the 100 Polaroid Land camera series from the 1960s decided to stop production in early 2016, making the five packs of film in my fridge the only remaining ones I may ever get the chance to use. These packs have become a permanent reminder of the expiration date of my practice and the practice of many others like me. Still, my cameras and I have not faced this fate alone. The Polaroid community remains, not so much to mourn the loss of a format, but to fight against its disappearance.

## **INTRODUCTION: MEDIA ANTHROPOLOGY AND THE STUDY OF POLAROID**

### **Anthropology and the Study of Photography**

Studies on photography and photographic practices from an anthropological perspective have often encompassed an approach that foregrounds the social aspect of photography and the way images acquire social meaning. Arguably one of the most well-known studies of photography's social role was that by Pierre Bourdieu (1990). For Bourdieu, photographic practices demonstrated the structural and systemic organization of society, that is, they operated as a reflection of the French class system. Photography was understood as a tool for social positioning, where what mattered was the picture as opposed to the process of taking it; its specificity and efficacy were disregarded (Gell 1998, 160; Pinney and Thomas 2001, 2; Pinney 2016, 35). The relationship between photography and anthropology, however, is one that dates long before Bourdieu's analysis. According to Christopher Pinney, anthropology has always been related to photography, with its origins tied tightly to colonial practices that saw photography as a way of scientifically fixing evanescent subjects (2011, 15). It was with Sir Everard im Thurn in 1883 that everyday life started to be documented in order to shed light on the whole cultural system (Edwards 2015, 238), though not without objections that considered 'aesthetic' photography "the corruption of the picturesque" (Pinney 2011, 41). Still, it was through Malinowski's participant observation that photography started to be seen as a means of eroding the distance between the anthropologist and the locals (Ibid 48). This new focus on photography as a medium for sociality began a process in which "photographs mark[ed] not only the photographer's standpoint but a point of view of those in front of the camera, even if that moment [was] asymmetrical" (Edwards 2015, 241). However, as Edwards notes, 1970s and 1980s anthropology saw a 'crisis of representation' (Clifford and Marcus 1986, 10), concentrated on critiquing anthropology's lack of reflexivity and the visual primacy of the discipline.

Even so, since the 1980s there has been a new wave of attention to photography from anthropology. This time, rather than it being related to scientific or class analysis, it has been embedded in cultural practices which encompass subjective, material, embodied and sensuous interactions (Edwards and Hart 2004, 1). This 'material turn' saw increased focus on the complexity of social meaning concerning objects and their sociability (Miller 1987, 2005; Buchli 2002), their mobile existence (Appadurai 1986, 3; Kopytoff 1986, 64), along with the capability of 'things' to affect us (Gell 1998, 16). The material turn in relation to the

image was followed by several ethnographies that acknowledged the relationship between images, people, and things. Many of these corresponded to collaborative ‘return projects’, where the once ‘colonial other’ was able to re-appropriate their images and narratives (Herle 2005; Geismar and Herle 2010; Geismar 2013). Another subject of the new ethnographic interest in photography was that of photographic studio practices and the role images take in specific contexts (Pinney 1997; 2002; Strassler 2010); or the role of the photographic image and memory in relation to power and political conflict (Azoulay 2008; Noble 2009). Since the 1980s ‘material turn’, then, “photography can no longer be contained within the box ‘visual anthropology’ where it has been conveniently shoved” (Edwards 2015, 248), but needs to expand into the effects of photography in material and social practices, along with the network zone in which they emerge (Pinney 2010, 149).

Still, with the advent of digital photographic technologies and the digitally mediated environments images now inhabit, claims of a new era of visual culture have emerged (Lister 1997, 253). From changes in the production of images – from chemicals to data, atoms into bits – two main questions have emerged. (1) A philosophical question, concerned with the epistemology and ontology of this ‘new’ image (Henning 2018, 5). (2) A socio-historical question, focused on the social transformations brought about by this ‘new’ image (Lister 1997, 256). To approach the changes in the production and different instantiation of the image, there has been a shift from visual analysis towards media anthropology, a shift that has started to question “not only how media are embedded in people’s quotidian lives but also how consumers and producers are themselves imbricated in discursive universes, political situations, economic circumstances, national settings, historical moments, and transnational flows, to name only a few relevant contexts” (Ginsburg, Abu-Lughod, and Larkin 2002, 2). This emphasis on media opens up the question of the content that the media produces to that of the social and material infrastructure that surrounds it, which, in a digitally mediated world, means considering the global nature of media technologies and the “other kinds of spaces” they inhabit (Ibid). For Debra Spitulnik, for example, focusing on the medium from a material culture perspective meant analysing how radio “ha[d] the potential to shape contexts and social relations in manifold ways” (2002, 346); while for Brian Larkin, it meant observing how cinema in Nigeria worked as a way to mobilize people, ideas, and commodities (2002, 319; 2004, 2008).

However, in the field of photography, this media perspective has been under-addressed. Most of the anthropological focus in photography today though considers its object quality, continues to be linked to that of the representational character of the image

(Edwards and Hart 2004), or the way digital photography has altered the role of photography from that of memory (Hirsch 1997; Noble 2009) to communication (Dijck 2007; Miller 2015). Yet few have looked into the social, cultural, and material meanings of the processes of image-making practices. According to John Postill, studying media “from a perspective of practice theory involves shifting attention from the content of the media to the embodied set of activities humans perform” (2010, 1). Discussing the origins of practice theory, Postill distinguished two waves: the first wave encompassed social theorists such as Bourdieu, Foucault, and Giddens, who were focused on distancing “from the constrictions of structuralist and systemic models while avoiding the trap of methodological individualism” (Ibid 7); while the second wave, including theorists such as Ortner, Schatzki, Reckwitz, and Warde (building on Couldry), argued for a body-centred perspective. “Practice theory is a body of work about the work of the body” (Ibid 11).

Thus, what the ‘practice turn’ in relation to media proposes is quite literally, an “open set of practices relating to, or oriented around, media” (Couldry 2004, 117; Postill and Bräuchler 2010; Pink et al 2016). That is, “to decentre media research from the study of media texts or production structures (important though these are) and to redirect it onto the study of the open-ended range of practices focused directly or indirectly on media” (Couldry 2004, 117). Couldry argues that the reason for moving away from text into practices has to do with distancing media studies from what he terms the insoluble question of causality, that is, the impossibility of proving that media causes changes in audience behaviour (Ibid 117). Or, in the case of the study of media industries and their production, the limitations this approach has when studying the uses of media in social life. For this, he offers the simple, yet poignant, explanation: we need to consider what people do with media<sup>4</sup> (Ibid 118).

Particularly, in the case of photography, this ‘practice turn’ implies analysing the entanglement in which photography needs to be understood “not as representation, technology, or object, but as the agency that takes place when a set of technologies, meanings, uses, and practices align” (Gómez Cruz and Meyer 2012, 204; Larsen 2008). This practice-based perspective, which enable us to look into the “hybrid zone... where the human and the non-human are folded into one another” (Pinney 2010, 167) – echoing Actor Network Theory (Latour 1999; 2005) – contrasts with either form of determinism (sociological or technological) to focus instead on the complex entanglement between camera and camera person. One such example of the attention to the entanglement that media technologies

<sup>4</sup> Couldry offers the following examples that can be tackled through the understanding of media as practice: what types of things do people do in relation to media? And what types of things do people say about media? (2004, 121).

enable is Jonas Larsen's analysis of digital tourist photography and the non-representational aspects of digital photographic practices (Larsen 2008). Another example is Francisco Martínez's (2018) ethnography of the use of photo booths in Berlin and why they continue to be relevant in a digitalized environment. Whilst *Digital Photography and Everyday Life*, an edited volume that looks into the role of cameras in everyday life, turns away from images to explore the complex entanglements in which they are embedded (Cruz and Lehmuskallio 2016, 2), the focus remains on different empirical case studies of image-making processes. What stands out is the authors' proposed understanding of media as practice; as a "routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood" (Reckwitz 2002, 250).

With a practice approach in mind, and whilst recognising that the object of study in this thesis could be inscribed in the field of visual anthropology due to the obvious representational qualities of Polaroid, from now on, I will refer to my object of study as Polaroid practices in order to emphasize the material, embodied, and mediated character of the medium. However, rather than limiting my theoretical approach to that of media practice theory, I will use the concept of practice as openly as possible, as a way of grasping the complex assemblages (Larsen 2008; Pinney 2010; Gómez Cruz and Meyer 2012; Gómez Cruz and Lehmuskallio 2016) that surround photographic practices today. I do so in combination with a material and visual culture studies-based attention to the agency of the object, and a media anthropology focus on processes of consumption, production, and circulation – albeit one that expands the theory of 'following the thing' (Appadurai 1986) into that of the 'back-end' of the value chain (Gregson et al. 2010; M. Thompson 2017). Drawing also on theoretical frameworks such as that of Science and Technology Studies that focus on the intertwining between technology and society, and how technologies can be affected by users and vice versa (Winner 1980; Bijker 1995; Kline and Pinch 1996; Klein and Kleinman 2002); media archaeology, which looks into the alternative histories and trajectories of media technologies (Zielinsky 2006; Huhtamo and Parikka 2011; Parikka 2012; 2015); and the attention of the field of archaeology regarding the temporal dimension of the technical artefact (Olivier 2001; Lucas 2014; Dawdy 2016), I hope to shed light on today's Polaroid practice without limiting my research to defining what Polaroid is (socially or materially), instead revealing the different practices and the material and social configurations that Polaroid mobilizes.

This decision, however, was not driven by a theoretical aspiration, but was informed by my empirical findings. During the time of my fieldwork, and after attending to multiple



*Polawalks* (Polaroid photographic walks) and other photographic related activities (see Methodology and Fieldwork section) across the UK (and beyond), along with interviews with practitioners, I realised that what was being photographed (the image) appeared to be superseded by the practice of image-making. Thus, I decided that instead of focusing on the content of the Polaroid images, either by observing their social function (Bourdieu 1990) or discovering the essence of (instant) photography (Bazin 1967; Barthes 2000; Sontag 2008), I would “focus on the practices, associations and connections afforded or shaped by photographic technologies” (Lehmuskallio and Gómez Cruz 2016, 8). With this argument, I do not intend to suggest that the representational character of the image does not concern my study, just that it needs to be analysed as a part of the material realm of the image and as an indivisible part of photographic practice.

Accordingly, rather than presenting what Polaroid is, my thesis, *Resisting Obsolescence: Polaroid Practices in the ‘Digital Age’*, explores a myriad of perspectives from which an analogue practices that inhabits the ‘digital age’<sup>5</sup> can be thought through. That is to say, instead of presenting a unified depiction of what Polaroid meaning is, this thesis concentrates on the way the continued practices of Polaroid can be thought as a form of ‘persistence’ and how challenging its disappearance reveals the ‘incoherence’ (Kracauer 1966) of the technological present. By exploring how Polaroid is materially and socially possible (production, use, and circulation); its social and cultural perception (communities, mediation, embodiment); the way analogue and digital photographic practices cohabit and intersect the same media environment (continuity, analogification, new old); and the economic and political discourses and expectations that relate to these technologies (obsolescence, nostalgia, progress, and time), the thesis seeks to grant agency to ‘old’ media technologies that despite being presumed to be obsolete, continue to inform the present and future of contemporary photographic practices.

In addition, this thesis seeks to recognize the resonance and value of Polaroid photography – a technology that has constantly been disregarded as a ‘gimmick’ by the history of photography despite revolutionizing both photographic practice and the market – in relation to digital photographic practices with which it shares many commonalities. Doing so becomes of particular relevance when we look at the assumptions ‘new’ media studies have regarding the ‘newness’ of media, including work regarding digital

<sup>5</sup> Although I use the notion of ‘digital age’ to refer to the technological ‘place’ Polaroid inhabits today, I use inverted commas to depict the equivocal assumption that the ‘digital age’ is only inhabited by digital technologies. In this way, I argue that the so-called ‘digital age’ is inhabited by a myriad of technologies that do not ‘coherently belong’ to that age (see chapter 6).

photography's supposedly revolutionary qualities (the possibility to see the picture straight away, retaking, sharing, no need for developing, etc.) which fail to acknowledge the connections 'new' media hold with 'older' ones (for example, see Larsen 2008). Even so, rather than presenting a historical analysis of Polaroid photography or an account that highlights the disparities between analogue and digital photographic practices (reinforcing the binary distinction between them, alienating one practice in favour of the other, or even worse, ascribing the 'death' of analogue in the hands of digital), this thesis explores the complex media environment that Polaroid inhabits thereby challenging the notion that 'new' only corresponds to digital technologies<sup>6</sup>.

Finally, I note that although focusing on the reasons people continue to use Polaroid today, this thesis is about the perceptions and expectations towards technologies, and the way media artefacts can challenge (through material and social practices) the hegemonic discourses that surround technology and the notion of progress. Furthermore, and considering that for Edwin Land, Polaroid's creator, the technology stood for, "point, shoot, see, nothing mechanical would become between you and the image you wanted" (Bonanos 2012, 87) – and keeping in mind that today Polaroid appears to stand out for exactly the opposite – this thesis seeks to address the continuities and transformations that run through technological change (Lister 1997, 269; Sconce 2000, 94; Henning 2007).

### **Media Obsolescence and the Myth of New Media**

Old, ruinous, antiquated, outmoded. These are just a few of the adjectives people use to describe media technologies from the 'past' that materialize in the present. But what exactly is being described with these adjectives? And when can it be said that media technology is 'from the past' and no longer contemporary?

In an article published in 2007, Peter Buse observed that "the cameras, the film, and the company that invented them are fast approaching extinction... Polaroid film itself is now quaint, archaic, an object of nostalgia" (2007, 35). However, reviewing his analysis 12 years later, it becomes clear that Buse's diagnosis failed to anticipate the 'second coming' of Polaroid practice, which today stands stronger than it ever did at the end of the 1990s and early 2000s. Even so, it is hard to blame Buse for this misdiagnosis. At the time he was writing, the Polaroid Corporation had already filed for bankruptcy once (and would soon do

<sup>6</sup> Although I value the theory of practice, most of what has been written is regarding digital practices. This again highlights the lack of analysis there is about analogue and digital photographic practices as two technologies that actively dialogue.

so a second time), and digital photography was growing stronger than ever, with every major photographic company investing in the technology. It was hard for Buse (and the many others) to foresee that Polaroid was going to be able to persist and defy all market analysis on the future of instant photography. The continuation of Polaroid today (both in terms of its material and social aspects), thus indicates that “the assumption of the superior forms replacing the old ones doesn’t stand up when we look more closely at the world in which we live” (Penner 2013, 30). That is, despite the cultural and economic orientation towards novelty and innovation, there is still an accumulation of leftovers (Acland 2007, xvi) that do much more than simply disappear.

Arguably, the best way to address the notion of the ‘old’ media technologies is through the concept of obsolescence, a concept that gained momentum with Bernard London’s plan to “end depression through planned obsolescence” (1932) (though it had already been recognized by Reginald P. Bolton back in 1910 in relation to the American skyscraper crisis) (Abramson 2012, 280). Bernard London’s proposal involved government policies that forced consumers to hand in their old commodities to promote consumption, an issue that emerged from his observations that due to financial constraints (mainly the 1929 Depression) people were keeping their goods much longer than desirable, hence, halting production and workforce. By creating a legal ‘use-by’ date to commodities, London expected to balance production and consumption, and “tax the man who holds things for a longer time than originally allotted” (London 1932).

Although London’s planned obsolescence law wasn’t approved as intended, it is safe to argue that since then obsolescence has permeated the way the western world conceives the production and consumption of commodities. Today, a simple search of the concept returns different definitions and categories of obsolescence (mainly two: stylistic and technological), yet all seem to indicate that it is strongly related to replacement of the old by more ‘advanced’ new technologies. For Mark J. P. Wolf, obsolescence corresponds to the process in which,

“technologies decline and fall out of use simply because newer or (supposedly) better technologies become available, and especially ones that are cheaper than the technologies they replace, other technologies are deliberately designated as obsolete by the companies and institutions that used to produce and support them” (2019,xv).

Following this description, Wolf proposes four types and stages of obsolescence. (1) When technology is no longer the dominant one of its kind (and it is replaced by something

'better'). (2) When the technology is no longer mass-produced (and thus, considered unprofitable). (3) When technology becomes rare and scarce (and people have to 'compete' to get to it). (4) When a technology completely disappears (and becomes a museum piece to be preserved). By means of these four categories, it becomes evident that obsolescence seems to be something that 'happens' to media technologies – an outside decision in which media's present and future is decided by external forces – and it's not necessarily linked to media's materiality (though it can be) or progress. (Wolf is quick to point out that obsolescence is in no way restricted to analogue technologies but expands into the digital realm). Interestingly, this was something that London already acknowledged back in 1932 when he stated that rendering people's goods obsolete didn't necessarily mean improvement – in fact, he referred to replacement as "the *probably* improved" (Ibid) (my emphasis) – yet he continued to blame the crisis on "people retarding progress". Obsolescence, thus, rather than indicating the replacement of an old technology by a newer one that can fulfil the same function in a supposedly 'better' manner, is embedded into the cultural and economic forces of capitalism (Maycroft 2009, 3) which inform the value of goods. Despite the convoluted origins of planned obsolescence – Vance Packard already recognized this in the 1960s when he announced the catastrophic consequences planned obsolescence held for American society (1963) – it is an undisputed fact that planned obsolescence has permeated all aspects of consumer society (and beyond).

Sixty years later, regardless of all the discussions that have surrounded planned obsolescence and the grim future it portends for both society and the environment, it is evident that the notion of replacement due to 'betterment' continues to inform consumer choices and attitudes towards media technologies (and arguably all consumer goods). At the moment of my writing, it is not unusual to encounter newspaper headlines declaring the 'death of the book' (at the hands of e-readers such as Kindle), or the 'death of TV' (at the hands of streaming platforms such as Netflix or Hulu), though, as we will see, these declarations are hardly novel.

### **The New and The Old**

"While analogue cameras depend upon high-street developing to make their photographs 'come to life', digital cameras make them by themselves and display them *instantly* on the (variably sized) screen in the back of the digital camera.... Whereas analogue photographs always depicted *past* events taking place *elsewhere*...digital cameras' screens can also show

ongoing events ‘right here’ when spaces of picturing, posing and consuming converge” (Larsen 2008, 147).

The reference above is a comparative account between analogue and digital photographic practices; one that is exemplary of the ‘new’ media rhetoric which constantly depicts the ‘new’ as a break with the ‘old’ (despite Larsen’s account accurately describing Polaroid technology), and corresponds to what Lisa Gitelman and Geoffrey Pingree call “the narrow devotion to the present” (Gitelman and Pingree 2003, xi). This ‘devotion’ (that Lister et al. 2009 refer to as “neophilia”) that focuses constantly on novelty, disregarding past media technologies’ contextual ‘newness’, is something that was first problematized by Carolyn Marvin in her seminal work *When Old Technologies Were New* (1989). By drawing attention to how media history often depicts the beginning of mass broadcasting through technologies such as the radio, and later television, Marvin argued that electric media technologies (telephone, phonograph, electric light, wireless, and cinema) can also be considered as such, noting that “new technologies is a historically relative term” (1989, 3). Through the analysis of these media technologies, she questioned the reading of media technologies as a history of progress (Ibid 4), in favour of studying them in the context when they emerged, when they were originally new. Marvin’s argument was later picked up by several media scholars that have continue to problematized the understanding of media in terms of the ‘old’ and the ‘new’ (Manovich 2002; Lister 1997; Lister et al. 2009; Acland 2007). One such case is that of Jonathan Sterne who questioned why despite computer technologies being not ‘new’ they continue to be considered as ‘new media’. For him, the reason computers continue to be judged as novelty has to do with the fact that these are perceived as not yet stabilized technologies, with their existence constantly being framed as a ‘yet-to-be-technology’ (which he is quick to note is a fantasy) (2007, 18). In sum, what these authors suggest is that “the ‘newness’ of new media is more than diachronic, more than just a chunk of history, a passing phase; it is relative to the ‘oldness’ of old media in a number of different ways” (Gitelman and Pingree 2003, xx). And that the distinction between old and new media appears to be embedded in ideological discourses of progress through technological change in which everything ‘new’ is hailed as a break from the past, that is, as a revolution.

It could be argued that the epitome of this grim disregard for the past in the advent of the new became apparent in 1995 at a science fiction conference. Author Bruce Sterling, while addressing the audience, voiced his concerns regarding the fast-pace technological changes society was experiencing and what they meant for tales about the future. Although not concerned specifically with media at the time, that conference was the moment Sterling

started to envision what would later become known as *The Dead Media Project*, an online collaborative project in which people from around the world were encouraged to cooperate and create “a book about media that have died on the barbed wire of technological advance, media that didn’t make it, martyred media, dead media” (Sterling n.d.). *The Dead Media Project* (or the *Dead Media Handbook* they aspired to create) acknowledged the vast amount of media technologies that had ‘died’ and ‘disappeared’ in the name of technological progress. It brought attention to the study of non-mainstream media that, due to various reasons, hadn’t last or made it into the History of media (with a capital H). Despite the noble project Sterling proposed: to rescue forgotten media from oblivion and put them back into media history (a task later echoed by Gitelman and Pingree, as well as the field of media archaeology), the whole conception of Sterling’s project was based on the assumption that media technologies had a life cycle, a birth and a death, and that the extension of this lifecycle was somehow implausible. And whilst he did acknowledge that media technologies might “shrink back to some protective niche”, they ultimately ended up “challenged by later and more highly evolved competitors” (Sterling n.d.). This last argument was the *Dead Media Project*’s shortcoming. Despite wanting to acknowledge media from ‘the past’ it failed to foresee that a media’s life could not be measured in the same fashion as biological life, and that many of the presumably ‘dead media’ that were being uploaded into the online database might still exist and have somehow managed to resist the ‘evolved ones’<sup>7</sup> (as the case of Polaroid demonstrate).

With this discussion in mind, the current existence of Polaroid instant photographic practice becomes the perfect case study for understanding not only the endless contrasting of the old against the new, but also the ‘futurological tropes’ of digital media, those of supercession and transparency (Gitelman and Pingree 2003, xiii); evidencing that obsolescence is an ideologically produced designation (Watkins 1993, 39; Henning 2007, 54; Sterne 2007, 23). In this sense, the presence of the so-called obsolete (the ‘dead’ media that is not supposed to be here anymore) suggests that “obsolescence might not mean death but only dormancy, or simply a fall from dominance that ends mass production and widespread usage” (Wolf 2019, 385), and that the media objects’ life span extends beyond that of the biological life cycle, into a ‘temporal dimension’ of their own. It becomes evident, then, that the dormancy that Wolf recognizes implies that obsolescence rather than being a static, stable

<sup>7</sup> With this, I do not intend to suggest that media technologies do not disappear – in fact, it is possible to estimate that hundreds of them, with many unknown to us, are indeed gone – but that the ‘life and death metaphor utilized to describe them does not take into consideration the problematic nature of these categories, as well as the complex socio-economical context that gives rise to them.

category in which media technologies fall and remain until their disappearance, is a transient one, which is constantly being challenged, as this thesis will show.

Accordingly, for a successful analysis of the current Polaroid practice it is necessary to acknowledge the disjuncture between the “old new media” (Henning 2007) and new media, but also the continuities (Gitelman 2006, 1), suggesting that the new has a lot more in common with the old than discourses on innovation and progress would like to admit. However, this argument is in no way unique. Media theorist Marshall McLuhan argued back in 1964 “that the ‘content’ of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph” (McLuhan 1964, 10). But what exactly did McLuhan mean by this? Arguably, Bolter and Grusin offer one of the most comprehensive analyses of McLuhan’s argument through the concept of remediation. Remediation, they noted, corresponds to the way a medium refashions its predecessors rather than simply disrupting [the media environment] (2000, 21). Still, this refashioning is far more complex than simply one medium borrowing from another (Ibid 45), and instead draws attention to how old and new intersect and coexist (Henning 2007, 49) in a much more complex relationship than obsolescence by replacement.

### **The Agency of Media**

In the introduction to *New Media. A Critical Introduction*, Martin Lister et al. propose that changes in the production, distribution, and consumption are more complex than the division between old and new media (2009, 10). Even so, the pressing question since the 1980s seems to be, how do changes in new media alter users’ lives? The answer to this question is not a straightforward one. The discussion regarding change through technology immediately brings forth the concept of agency and the capability of media technologies (and artefacts) to produce social change. Bolter and Grusin poignantly addressed this by affirming that “media technologies are agents in our culture”, being careful to clarify that their statement did not imply technological determinism (2000, 21). But why was this clarification necessary?

When the question of the agency of media – usually understood as the relations of intentions and actions (Gell 1998, 16) – appears, two key figures in the discussion are Walter Benjamin and Marshall McLuhan. Although the latter has been much more vilified by the field of humanities than the former for his notorious phrase – “the medium is the message” (1964) – both have been widely criticized for their ‘technological determinism’ (Gitelman 2006, 6) (for a critique of technological determinism see Williams 1974; Bijker 2010). For

Benjamin, mechanical reproduction had the revolutionary potential to alter perception and social life (2008); while for McLuhan, although “the railway did not introduce movement or transportation or wheel or road into human society...it accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure” (1964, 8). (McLuhan’s argument was later echoed by Wolfgang Schivelbusch (2014), who argued that the invention of steam power and the locomotive altered the way time and space was experienced, and Friedrich Kittler’s understanding of the writing machine “operat[ing] in the closest vicinity to the word, is in use; it imposes its own use” (while echoing Nietzsche’s “Our writing tools are also working on our thoughts”) (1999, 200). For both Benjamin and McLuhan, technology has the capability to bring social change (or accelerate) social life processes, a stance which has been considered technologically deterministic because it suggests that it is technology that drives social change, and not the other way around.

Alternatively, Marvin argued that the study of media is the study of their uses (1989, 4), while Gitelman noted that “media are the result of social and economic forces so that any technological logic they pose is only apparently intrinsic” (2006, 10). However, it was Raymond Williams who launched the biggest critique of technological determinism (and McLuhan specifically). For Williams, technological changes were never just material changes or even changes of ways of seeing but “altered processes and relationships in basic material production” (Williams 1977, 162). About this, he reasoned,

“the real determining factors – the distribution of power or of capital, social and physical inheritance, relations of scale and size between groups – set limits and exert pressures, but neither wholly control nor wholly predict the outcome of complex activity within or at these limits, and under or against these pressures” (1974, 133).

Nonetheless, as Lister et al. noted, Williams’ understanding of McLuhan’s technology as driving social change was a misrepresentation of the McLuhan’s concept of causality. According to Lister et al., Williams interpreted McLuhan’s concept of causality as mechanical, while for McLuhan it corresponded to non-linear causality, where rather than one thing being the cause of another (mechanical), change emerges due to multiple factors (Lister et al. 2009, 332). Regardless of the veracity of Williams’ misrepresentation of the concept of change (or agency) that Lister et al. propose, and distancing myself from either form of determinism, what is of importance in this discussion is the nature of the



relationship between technology and society, and how “concentrating only on their discursive construction detracts from their material nature as technologies, in actual lived moments of adoption and use” (Lister et al. 2009, 243). The capability of media technologies to affect society (and produced change), thus, cannot be understood by simply restricting agency to people or to things; instead, one must consider the capability of materiality to facilitate and enable certain practices to affect back. As Winthrop-Young and Wutz pertinently suggest in their analysis of Kittler’s work, “the question of how people operate upon media thus has to be complemented by the equally important question of how media operate upon people” (1999, xxii). Therefore, the agentic debate, rather than being solved through “purification” (Latour 1993, 11; Pinney 2005, 257; Larsen 2008, 144), that is, by privileging either the technical or the social, needs to be understood from the perspective of the hybrid; the collective relationship between humans and non-humans (Latour 1999, 180), that is, the camera person and the camera (Pinney 2010, 167) in the construction of photographic practices. A “photographic agency [as] a relational effect that first comes into force when a heterogeneous network of humans and non-humans is in place” (Larsen 2008, 145). This heterogenous approach, then, takes the following into consideration: the entanglement media practices have with everyday life (Larsen 2008; Gómez Cruz and Lehmuskallio 2016, 3), and the role of both the social and the material (Miller 2005; Tilley 2007).

### **The Persistence of Media**

“Despite modernity’s fantasy of erasing the old so as to construct the (purely) new, the outmode does not go away – it only goes elsewhere” (Jucan 2018, xii); so argued Jucan while analysing the so-called obsolete or ‘remains’. Similarly, Wasserman noted that “the scandal of the obsolete is precisely that it does not vanish” (in Schneider 2018, 59), while Hertz and Parikka indicated,

“things break apart everyday anyhow – especially high technology – and end up as inert objects, dead media, discarded technology. Yet, dead media creeps back as dangerous toxins into the soil, or alternatively as zombie media recycled into new assemblies” (2013, 429).

Following these arguments, as Acland suggests, “few phrases have been evacuated of meaning...faster than ‘new media’” (2007, xix) and, despite planned obsolescence and the futuristic tropes of new media telling us that the ‘old’ simply disappears, it is evident that the

obsolete lingers and remains either as ‘trash’ – too valuable to be thrown away, yet too ‘old’ to actually be used (Sterne 2007, 16) – or as forgotten objects in the attic, again, too precious to be thrown away, yet not valuable enough to display (Acland 2007, xx). Conversely, as Hertz and Parikka noted, ‘dead’ media creeps back in the form of zombie medias. Through practices of ‘circuit bending’, that is, re-appropriating, customizing, and manipulating old media in unexpected ways, the “false image of linear history but also the circuits and archive that form the contemporary media landscape” (Hertz and Parikka 2012, 427) are revealed. The practices of modifying, altering, tinkering, or upcycling media technologies that are carried out by individuals without formal training challenge the assumption that new media simply replaces the old, and give old media the chance to persist and resist planned obsolescence by not disappearing with the emergence of newer technologies. In this way, technology, rather than being determined technology, that is, having its usage defined by developers (Williams 1974, 133), affords alternative usages and practices that challenge its disappearance. As Henning writes, “[E]ven trash can become renewed and reactivated for critical purposes when it is reinserted into a social practice” (2007, 61) or, as I suggest throughout this thesis, also material ones. Through these residual media<sup>9</sup> and altering practices, the myth of new media troubles the narratives of progress associated with technological advancement where the ‘new’ is seen as a break from the past, rather than continuity of it (Acland 2007, xix). Consequently, rather than fixating on the ways new media supposedly supersedes the old, there is a need to focus on the ‘ruptures’, revolutions, or paradigm shifts that media go through (Manovich 2002; Gitelman and Pingree 2003; Gitelman 2006; Henning 2007); to explore, echoing Bolter and Grusin, the ways in which media refashion themselves to answer to the challenges of new media (2000, 15).

<sup>8</sup> Though I don’t necessarily agree with the figure of zombie media proposed by Parikka and Hertz due to the implication of media ‘dying’ and then ‘reviving’, I do agree with their emphasis on how circuit bending enables different outputs to emerge from the sealed ‘black box’ of technology (2012).

<sup>9</sup> The concept of residual media elaborated by Acland can be understood as the media that occupy space in storage houses or are shipped to other parts of the world, accumulated in landfills, or converted to other uses (2007, xx), and draws on Raymond Williams’ concept of ‘the residual’, which is that which have been actively formed in the past, yet continues to intersect the present (Williams in Acland 2007, xxi).

## One-Step Photography: A Little History of Polaroid

During the summer of 2008 two men sat outside the former Polaroid Corporation factory located in Enschede, The Netherlands. These two men, Florian Kaps (an ex Lomography salesperson with a PhD in Biology) and André Bossman (a former Polaroid Corporation employee), were the new owners of the factory that sat behind them. However, the story of how this acquisition came to be started many years before with the bankruptcy of one of the most iconic western brands of all times, The Polaroid Corporation.

The Polaroid Corporation, created in 1937 by American inventor Edwin Land, originally produced polarizing agents (hence its name) for the automobile and, later, the war industry. However, the Corporation only started to envision photographic technologies after Land's daughter, Jennifer, asked, during a holiday stroll in Santa Fe, California, why she couldn't see her picture straight away. Only a couple of hours after the event, Land recalled that he went to a friend and imagined "a dry camera which would give a picture immediately after exposure" (Life 1972). Though the story has never been confirmed by his daughter, Land made sure to create a compelling narrative of the genius moment his invention was first envisioned. Ten years later, Land was showing the first one-step camera in front of the Optical Society of America. The camera he exhibited back then differed from Polaroid's iconic white framed one that comes to mind upon hearing the company name, though it still adhered to the same principles: 'instantaneous'<sup>10</sup> photography that eliminated both the waiting time and the 'middle man' – the photographic developing service offered by Kodak – taking photography to its "degree zero" (Buse 2007). The Polaroid Land camera presented on the 21<sup>st</sup> of February 1947 in front of the scientific audience produced an 8x10 inch sepia-toned image of Land himself that had to be peeled-apart and coated to prevent the image from fading, and was later demonstrated to the press in a side room that same day (fig. 1). Newspapers from the time heralded that "the revolutionary new camera accomplished in a single step all the processing operations of ordinary photography" (Laurence cited in Kaps 2016, 22). A year and a half later, following its successful reception, the Polaroid Corporation introduced the Polaroid Land Camera 95 to the market. The camera cost \$89.75 and weighed over a kilo. The film, arguably the most complex part of instant photography, proved not to

<sup>10</sup> I use inverted commas to refer to the instantaneous character of Polaroid to note that Land did not agree with this. For him, Polaroid was one-step-photography rather than instantaneous. Also, as Peter Buse notes, the concept of instantaneity is relative, with Polaroid being considered (in relation to digital photography) as 'delayed' photography (Buse 2007).

be easy. For the next 20 years, Polaroid relied on Kodak to provide the negative layer of their film (Bonanos 2012, 42).



(Fig. 1) Edwin H. Land demonstrating Polaroid Land instant film, April 1947. Polaroid Corporation Records. Baker Library, Harvard Business School<sup>11</sup>

From that day on, Land devoted himself to making the photographic process easier; although in the eyes of photographers, Polaroid was deemed little more than a ‘gadget’ (Ibid 44). To change this, Land sought the help of American photographer Anselm Adams who worked as a consultant for the Polaroid Corporation, bridging the worlds of scientific development and photography<sup>12</sup>. Commissioning Adams to try different film formats, Barbara Hitchcock notes how “the sight of artists, scientists, and engineers with their heads together, hovering over photographs and technical spreadsheets, evaluating the performance of newly minted films, became the norm” (Hitchcock 2017, 96).

Years of invention, experimentation, technological development, and failed attempts, consisting of multiple film batches (among them Type 41, the Corporation’s first black and white film which subsequently faded) followed that first camera. The solution? The image needed to be coated and left to air dry, a step that lasted until 1970. As Bonanos argued, this

<sup>11</sup> <https://www.library.hbs.edu/hc/polaroid/instant-photography/introducing-one-step-photography/>

<sup>12</sup> Regarding the “art-science crossover”, Ansel Adams asked Land in 1951: “Have you considered the tremendous effect your new high speed film may have on astronomical photography? Especially in rendering surface detail of the planets... I am very anxious to welcome this new material on the market as I think is a *major* contribution” (in Edwin 2017, 18).

made Land's elegant one-step photography into two-step photography (Ibid 50). After the Polaroid Land 95, other camera models came (Model 110). Though, for Land, the question remained how to make colour film possible. Since the end of the 1940s, he commissioned his 'Miscellaneous Research Department' (the Research & Development team) to look into the possibility; a possibility that was materialized in 1957 when Land showed his first test films to Kodak (who continued to produce the negatives). "Polacolor arrived in stores in 1963... [with a] matching new camera, called the Automatic100, still required the photographer to pull a tab (two tabs actually) and peel the picture off its negative, but the system much improved" (Ibid 59). This system, which was later called 'pack film', didn't develop inside the camera or need to be coated, so it proved to be extremely successful and became the main film of the corporation until the 1970s when integral film was invented (although it continues to be used today, see chapter 4).

However, as was Land's style, during those years the corporation continued to work simultaneously in many other projects. One of these had to do with the long-standing debt to professional photographers who saw Polaroid's lack of negative as a drawback. This debt was paid in 1961 when Polaroid released its Type 55 film which produced a negative as well as a positive. Another was 'the Swinger'<sup>13</sup>, Polaroid's first hard-plastic camera that appealed to a younger market (selling under \$20). Released in 1965 with a catchy TV commercial, the Swinger's small-format images (2x3 inches) proved successful with the youth who were encouraged to take the camera on their outings (Bonanos 2012, 75; Buse 2016, 31). In parallel, the corporation developed other formats: the 8x10 made for professional photographers, and the 20x24 inches that Land commissioned from his team to awe the corporation's shareholders (though many more would be left in awe). The 20x24 camera became very popular with well-known artists such as Chuck Close, Andy Warhol, and John Reuters (who continues to run 20x24 Studio in New York, although the studio currently suffers scarcity concerns).

### **The Game-Changer**

"No garbage, no imbibing time and small-size camera" (Life 1972) were the words Land wrote in a memo to his development team, and which he recalled while being interviewed by *Life Magazine* in the event of the release of the newest Polaroid camera, the SX-70 (fig. 2).

<sup>13</sup> Some people argue that the name of the camera, 'the swinger', was a hint to Polaroid's X rated users while others argued that it had to do with the movement that the camera made when hung on the wrist (Bonanos 2012, 75).

This camera, as opposed to the ones that came before, was aimed at easing the three main ‘issues’ Land saw with the previous models. (1) Due to the film needing to be peeled apart, the corporation became aware that major touristic sites in the US were being marred by Polaroid trash being left behind. (2) The peel-apart film needed time to develop the image inside the camera. (3) The cameras so far, although their size had been reduced since the Land 95, were still large in comparison to other film cameras (like Kodak Instamatic<sup>14</sup>, for example). For this reason, Land was adamant that this new camera needed to fit in one’s pocket so it could be carried around, something that he made sure to demonstrate at the camera launch when he took it out of his coat and unfolded it in front of the audience.



*(Fig. 2) Polaroid SX-70*

The camera was a foldable SLR (Single Lens Reflex<sup>15</sup>) with a 10 inch to infinite focus, light adjustment, and a foldable chrome-fibre glass body covered in leather. It is said that it took the Polaroid Corporation \$2 million to develop the eyepiece of the camera, which needed to function in a smaller space than any other lens so far, in order to adjust to the foldable system. More importantly, the white framed film that made the Corporation a Western world phenomenon needed decades of research and millions of dollars in investment until it saw the light (the total cost of the camera and film is estimated at \$250 million, though some

<sup>14</sup> Though its name may be misleading, the Kodak Instamatic wasn’t an instant camera but a 35 mm portable camera. Kodak did eventually develop their range of instant cameras named Kodak EK and later Kodamatic, though these were later discontinued due to a patent infringement lawsuit filed by the Polaroid Corporation.

<sup>15</sup> Single-lens reflex cameras use a mirror inside to allow the photographer to photograph exactly what he sees through the lens. This differs from other systems such as the Twin Lens Reflex, where one of the lenses works as a viewfinder while the other works as an objective lens, or fixed focus, where the lens is independent from the viewfinder.

accounts estimate it might have been as high as \$1 billion) (Bonanos 2012, 93). In this new developing system, ‘integral film’ was made from 17 layers of compounds, where

“hundreds of reactions [took] place in perfectly choreographed sequence...us[ing] Land’s ingenious opacifiers (light blockers), which, when activated by the chemical reagent contained within the chemical pod, created a shield between the light-sensitive emulsions and the clear outlet layer” (Adam 2017, 42).

The SX-70, more than any other camera the Polaroid Corporation had released so far, was the one that came closest to the one-step photography Land had initially envisioned, with the camera mechanically ejecting the film, and the image developing right in front of people’s eyes in a matter of minutes<sup>16</sup> without any coating or drying needed. Furthermore, the white iconic frame, which came into being so that the chemical ‘pod’ could be incorporated into the film, rendered the image ‘ready’ to be exhibited, as an object of its own accord, a “photo object” (Buse 2010b). For Land, though, the ‘instant’ potential of the camera enabled the photographer to judge its results straightaway and learn through the process, along with “provid[ing] a medium for ‘artistic expression’ to anyone with only a reasonable amount of time” (Life 1972). But the possibilities of the SX-70 far exceeded those he envisioned. The complex materials from which the film was made meant that the first batches weren’t as ‘stable’ as the Corporation had intended (as with many other Polaroid products before). The emulsion made of gelatin remained soft and malleable hours after the image was taken, enabling practitioners to experiment with the surface of the picture, which made Polaroid photography the perfect bridge between photography and painting (Bonanos 2012, 98). Though later fixed, practitioners continued to experiment with the surface of the image, rendering the medium an artist favourite due to its plastic properties<sup>17</sup>.

Beyond this, what made the SX-70 so popular was the intimate gesture the technology enabled. According to Bonanos, with the SX-70, Land wanted to achieve a photographic medium that gave “no sense of anything between the photographer and subject... one should see one’s subject as if just gazing at it, seamlessly. One should not have the experience of looking through a machine” (2012, 93). This, along with the fast processing speed of the image, and the dispensability of a darkroom (or lab technician) allowed new

<sup>16</sup> Though Polaroid photography is often called instant photography, Edwin Land constantly emphasized that it was “one-step photography” as the results were not strictly instant. The image taken with the SX-70 took 30 seconds to appear, yet a full 10 minutes to completely develop.

<sup>17</sup> Some of the artists who exploited this plasticity were Ralph Steadman, Lucas Samaras, and David Hockney.

relationships between the photographer and her camera, and also the photographer and her photographic subject (for example, the case of Tom Bianchi's *Fire Island*, see Chapter 5). Thus, the instantaneous and physical quality of the image with the white frame, a feature which made them easy to be 'passed around', soon made Polaroid the "life of the party" (Buse 2010, 222; 2016), as the Polaroid Corporation later advertised. This transformation meant that the once mnemonic role of the photographic image shifted to a social one; the image's main role was now to be experienced and shared. Even more, these same characteristics made the Polaroid picture the perfect medium for users to explore amateur erotic images, which were sent across different cities to be shared by wider swinger communities (Edgler and Kiser 1982).

Additionally, as Peter Buse suggests, the speed of Polaroid resulted in the collapsing of the 'taking' into the 'using' (2010, 222). This meant that photography began to be experienced both as practice and image at the same time (as opposed to the division of these two in the case of 35 mm photography), a fact which not only supposed a change in the experience of the image but also in that of the photographer and the photographed.

### **The Mass Market**

The SX-70 sold out on the day of its release. The extent of the relevance of this camera can be seen in the analysis made by *Life Magazine*: "Polaroid sells more cameras over \$50 than all other manufacturers combined. Of five of the billion pictures snapped by amateurs in the US annually, 20% are already Polaroid pictures. The SX-70 should increase that share" (1972). The money the Corporation made went into different factories, principally a plant to make the negative layer of film that until then Kodak was in charge of manufacturing. Notwithstanding the success of SX-70 in the eyes of the market, the R&D spending for the camera had been so great that the next task for Polaroid was to reach a larger audience to secure a larger consumer base for both cameras and film. This was no easy task considering the price of the camera was high for the mass consumer (the SX-70 initially retailed for \$180), used to 35 mm photography and much cheaper cameras. This made the Polaroid Corporation start manufacturing plastic body cameras that were easily accessible for the mass market and would drive up the film market (from which Polaroid made revenue). In 1976, Polaroid released the Pronto! the first of their box-type cameras, which was later followed



by the Model 1000 One-Step (fig. 3). The big step came, however, in 1981 with the release of their first box-type 600 cameras.



(Fig. 3) *Polaroid 1000*

Though the technology that the 600 box-type camera used was the same as the SX-70, the new design of the camera enabled the corporation to lower their prices. However, the change in design also affected the way Polaroid photography was perceived. By reaching a wider audience (and arguably a more amateur one), Polaroid soon started to be identified with ‘easy’ and ‘expendable’ photography: What were Polaroids for? The most clear-eyed answer is that Polaroids were, overwhelmingly, for amateur snapshot photography (Buse 2016, 20). Roland Barthes, for example, wrote in *Camera Lucida*: “Polaroid? Fun, but disappointing” (1993, 9) (for an extended analysis on Barthes comment regarding Polaroid, see Buse 2007, 31). This move also drove Polaroid away from the innovative and luxurious photographic space it had inhabited thus far. Still, artists continued to use their cameras, and Polaroid continued manufacturing different versions of the box-type 600 camera, many of them incorporating innovative technology, such as the Sonar Autofocus system, integrated flash – as in the Model 680, a foldable camera that is arguably one of Polaroid’s best – though what varied the most was the aesthetics and design of the cameras, which now came in a whole range of colours and designs.

By the end of the 1980s, the corporation released the Polaroid Spectra camera range, with sharper lenses and a wider film format with some versions including foldable bodies, timer, close-up attachable, and later, in 2004, with LCD viewers. Considering the various uses that were being given to Polaroid up until then (in the film and fashion industry as ‘test’

<sup>18</sup> 600 refers to the ASA/ISO of the film, which was much higher than the previous 100 used by the SX-70.

shots, for example), the corporation then released SLR Spectra Models (Macro 3 and 5) aimed at the fields of forensics and medicine. These models included remote shuttering, high-spec close-up lenses, as well as a printed grid film that enabled users to accurately measure their subjects. This was the decade in which the corporation grew its massive audience, the “Polaroid camera [becoming] the widest-selling camera in history, with a peak in the late 1970s and early 1980s... [and] by 1983 46.3 per cent of American households contained a self-developing camera” (Buse 2007, 33).

### **The Beginning of the End**

Seeing the growth of the instant market, Kodak, who at the beginning had considered Polaroid photography a simple ‘gadget’, started to consider it as a competitor. Until the 1970s, Kodak had manufactured the negatives needed for Polaroid, but, seeing the size of the market, soon decided to stop unless Polaroid authorized them to make their cameras and instant film. Polaroid, taking into consideration the size and reach of Kodak, did not agree to this and ultimately built their own factory to produce the negatives. However, in the meantime, Kodak had been researching the instant market and in 1976 they released their first instant camera, which, although similar to Polaroid, used a different exposing technology (Bonanos 2012, 127). Following Kodak’s release, the Polaroid Corporation, which since the beginning had been extremely protective of their patents, sued Kodak for 10 patent infringements. The trial, which lasted 14 years and took up most of Land’s time, concluded that Kodak could not continue to sell or produce any of their instant formats. Kodak also had to pay Polaroid \$909,457,567 in damages (on top of the settlement they paid to their users for the 16 million cameras they had sold that were now obsolete), becoming the biggest patent lawsuit that had ever been settled in the US (Bonanos 2012, 132). Though the amount of money might seem impressive, it was far from the \$12 billion Land intended to get, and, for a company the size of Kodak, it did not have a huge impact. On top of that, by the end of the lawsuit the photographic scene had changed rapidly, with instant photography declining in popularity. A few years later Polaroid’s growth became stagnant.

Despite the growth the corporation had had during the 1980s, mainly thanks to their cheap plastic cameras and film, Land never stopped envisioning new technologies and investing in the R&D department. In 1977 Polaroid released Polavision, their own instant movie film format. Though, in theory, the development was quite innovative for the time (the formal research had started in 1961), as many people put it (among them, Sony’s chairman and Land’s friend, Akio Morita), the invention “simply came too late” (Bonanos

2012, 115). Contrary to instant photography in which “much of the appeal of instant photography is that it draws people together. It’s an icebreaker, a conversation-starter. None of those qualities made their way into Polavision, because viewing was tethered to the player. You had to go to it; it didn’t tag along with you” (Ibid). When Polavision was launched, Kodak had already released their Super 8 mm film format (1965), and Sony had just released Betamax (1975). Both technologies offered alternatives that Polaroid’s video system did not, mainly sound, longer recording time, and easier viewing system. In all, it is estimated that the Corporation invested \$500 million in Polavision, and accounts stated that they only sold around 60,000 units, leaving Polaroid with a \$70 million loss (Adams 2017, 57). Although not enough to put the Corporation in trouble, the loss was mainly of faith in Land’s leadership, who until that day had only envisioned successful technologies.

Although there are many different and even contradictory accounts regarding the reasons the Polaroid Corporation went into bankruptcy – digital photography is often hailed as the main culprit, with Buse identifying how “the slow poison of ‘new media’ worked through the 1990s on Land’s invention” (2010, 218) – these can be traced back to the 1977 ‘failure’ and the way the events started to unfold after that. Along with the loss of faith, Land, who invested most of his time in the patent lawsuit with Kodak, grew apart from the corporation, and eventually, as announced by *The New York Times* in July 28, 1982, “an era end[ed] as Land le[ft] Polaroid”. Hence, by the time digital photography arrived, the corporation had been struggling for years; a fact which led Bonanos to compare the corporation decline with a balloon slowly losing its air (2012, 136). Among the other reasons he listed were Land’s inability to choose a successor to lead the corporation, and the huge investment in manufacturing sites (cameras, film, batteries, chemicals) and the cost of running them.

In the meantime, Polaroid established a collaboration with Philips into digital imaging (1987) (though the 1.2 megapixel images were not deemed any good by those in charge) (Ibid 149) and invested in a digital printing system (1991) that reached nowhere for similar reasons. Additionally, Kodak’s “one-hour photo lab” colour pictures and 35 mm camera prices going down at the same pace as their technology improved, while Polaroid’s integral film, though good in the hand of experts, didn’t lend itself as easily for the everyday user, also ended undermining the technology. It was during this time that Polaroid cameras such as SpiceCam, Tasmania Devil, McDonald’s, and other branded items that were easy to sell arrived. Between 1998 and 1999 the corporation experienced a brief turnaround with its i-Zone camera (a small-format instant snapshot camera whose pictures came with funky colourful frames) that

was aimed at the teenage market, and enjoyed popularity in Japan (Buse 2007, 35), though not enough to turn around their bleak economic situation.

In 2001 the corporation filed for Chapter 11 bankruptcy protection (dismissing thousands of employees with minimal payoffs), and in 2005 was purchased by Petters Group Conglomerate, which used the Polaroid name to sell DVD players and LCD Television sets. Later, in 2008, the Petters Group announced they were stopping film manufacturing, stating that the existent film would be enough to last until 2014. However, Tom Petters, head of the Group, was later arrested by the FBI for fraud, leading Polaroid to file for bankruptcy once again. Finally, in 2009, it was once again purchased by another US/Canada investment group (Buse 2010a, 218). Accordingly, the corporation spent most of the first decade after 2000 fighting survival. Ultimately it was kept only for its branding, which was estimated to be one of the most profitable in the Western world. In this way, a company that was once recognized for its innovation became just another subsidiary in a crowded marketplace (Ibid).

### **The Impossible Project**

Although the corporation officially discontinued film production in 2008, film production had begun to decline from 2005 when the company first changed hands. Under Petters Groups, the corporation had slowly started to be scrapped and their manufacturing sites (US, Mexico, Scotland, and The Netherlands) were being closed down. However, in the meantime, Florian Kaps had already started to mobilize forces to revert this. In 2005, Kaps travelled to Polaroid European HQ in Offenbach, Frankfurt, to meet with those in charge of the European Polaroid film production. There he hoped to persuade them to continue film production, since, according to his diagnostic, thousands of users around the world wanted to continue to use Polaroid and would continue to buy it if given the chance. What happened next, Kap recalls, was him signing a 5-year contract and receiving 180,000 euros worth of film that he needed to sell, according his new job as an official Polaroid reseller (Kaps 2016). After this, Kaps and his associate, Andreas Hoeller, launched two online websites: *unsaleable.com*, for online sales, and *polanoid.net*, a picture-based social media platform, a site for the practice to be accessed, circulated, and more importantly, shared.

However, despite Kaps' deal (and several attempts to convince Petter Groups of the potential of Polaroid), the corporation continued to dismantle their production sites. In 2008, Paul Telford, UK's Polaroid manager, invited Kaps to the closing down party of the Scottish manufacturing plant. At that event, Kaps met André Bosman, the current manager of the Enschede Factory, who revealed to him that he, along with some colleagues, were

making plans to resume and rescale film production. There, Bosman told Kaps, “one essential building, one year, ten people: 55 per cent chance” (Kaps 2016, 181). On the 16 June of 2008, the Enschede factory was next on the scrapping schedule. That day Bosman and his team chained themselves to the factory, while Kaps negotiated with Petters Group with the help of Telford, and a growing global community led by Dave Bias in New York and Rhiannon Adam in London. It was to no avail. Petters wasn’t interested in negotiations and was adamant about scrapping the factory. However, as Kaps recalls, due to a stroke of good luck, on the 24th September the FBI arrested Petters for fraud, Telford briefly took his place as Director of the Corporation, enabling the newly founded The Impossible Project – named after Edwin Land’s famous phrase “don’t undertake a project unless is manifestly important and nearly impossible” – to gather the \$180,000 needed to purchase the last standing factory. After the purchase, they rehired a dozen of former employees and set themselves a one-year time frame to relaunch integral film, which, lacking the manufacturing sites for batteries, chemicals, and negatives, proved to be very difficult (Bonanos 2012, 167). Regardless, in 2010 The Impossible Project released their first film batch which, albeit far from the original Polaroid film in term of image quality and stability (the new film lacked contrast and the first images taken with it disappeared after a few weeks), enabled practitioners to shoot once again. As the data collected during my fieldwork suggests, these first film batches did not quite meet the expectations of many long-time Polaroid practitioners, however, they did manage to caught the eye of a more experimental type of user who didn’t care so much about the quality of the image, but rather the possibility of continuing to use the format. This is something that was noted by Polaroid researcher, Peter Buse, who argued that rather than being a drawback, the instability of the new film, (along with a market strategy, and the need for meticulous rituals) was used by The Impossible Project to attract a new set of “users, calling them ‘reckless, creative and artistic’ (Buse 2016, 220).

By 2016, The Impossible Project had already released multiple film batches both colour and black and white, with each of them improving on the previous film’s formula and stability (both 600, SX-70, and Spectra). In addition, they released multiple variations of the film, such as duo chromes film (two tinted colour films) and different frames, along with some brand collaborations. In 2016 they released the Impossible I-1, their first instant camera, which linked instant film with digital technology by allowing users to control the camera via Bluetooth (shutter, manual override, along with some creative techniques such as double exposure and ‘light painting’) (fig. 4). Though advanced in design and highly creative,

with a lightweight body and a detachable viewfinder, the I-1 received mixed reviews. Many hailed the analogue/digital crossover (that kept the image analogue yet enhanced the manual capabilities of the camera through a digital app control), others criticized it for having a long learning curve (as opposed to easier 600 traditional models) which meant a lot of expensive film waste. It was also said to be a ‘design-led’ camera, as opposed to a photographically driven one. Ultimately, The Impossible Project only released one edition of the I-1 and soon discontinued it, though the I-type film remained available.

Another of Impossible analogue/digital incursions was the Instant Lab, a ‘darkroom’ device that allowed users to analogously print the images from their phones into an instant format. Launched as a Kickstarter campaign at the end of 2012, the *Impossible Instant Lab: Turn iPhone Images into Real Photos*, aimed to bring together “instant aficionados” with the digital photographic world. The Instant Lab not only completed the Kickstarter campaign, but lived to see different editions that proved to be a highly successful mass-consumer product (it sold out during Christmas 2016 at The Impossible Project store in London), though later it was also discontinued<sup>19</sup>.



(Fig. 4) *The Impossible Project Brochure (scanned)*

<sup>19</sup> Though there are no official accounts on the discontinuation of the Instant Lab, at the time I was told it had to do with the inability to source the lenses of the devices. However, at the time of discontinuation Polaroid Originals was already in starting, so it is plausible that they wanted to get rid of the product to start with a clean slate, as they did with the I-1 camera. Later, by the end of 2018, Polaroid Originals released a new version of the Instant Lab.

## Polaroid Originals

At the end of 2017 and a few years after Kaps was no longer involved in the Company, a major shareholder of The Impossible Project bought the intellectual property of the Polaroid Corporation, a move that allowed them to turn themselves into *Polaroid Originals* (Zhang 2017). The change in name, though arguably a marketing strategy following the tendency of several brands that brought back their ‘vintage’ products (like the case of *Adidas Originals*, for example), suggested a major shift in the practice since the creation of The Impossible Project. With the clear intention of moving from a practice “catere[d] to a niche market” (Ewing 2017, 12) that relied mostly on long-time practitioners and film enthusiasts, Polaroid Originals appeals to a newer generation of users, arguably younger ones, and with them to the mass consumer market<sup>20</sup>, albeit never in the scope of Edwin Land’s original Polaroid Corporation (fig. 5).

Since then, Polaroid Originals have continued to grow, with two new cameras that have hit the high street, along with some collaborations (including the One Step Two: Stranger Things Edition<sup>21</sup> camera released to mark the anniversary of the One Step One). Thus, despite Buse predicting the obsolescence of Polaroid in 2007, and later, in 2016, arguing that obsolescence was the basis of The Impossible Project’s success – “This is just one of the reasons why you aren’t likely to find Impossible Project film in your local Wal-Mart any time soon” (Buse 2016, 221) – based on the success of Polaroid Originals and its widespread availability of film, which is now sold in Asos, Argos, and even Walmart, it can hardly be argued that Polaroid relies solely on its obsolescence. However, it cannot be argued that the practice continues to be the same as the one Land first envisioned, that is, as hassle-free one step photography that anyone can enjoy.

<sup>20</sup> During the course of my research I spoke to several Polaroid employees about the change in name and branding. Though most of them acknowledge that this change would make things easier for customers to find the film, it also implied leaving behind the experimental years of The Impossible Project for a wider, younger audience. One of them told me specifically that Polaroid “wants to go mainstream, they want to reach Walmart”, which my interlocutor saw as a drawback.

<sup>21</sup> Stranger Things is a Netflix production released in the year 2016. Set in the 1980s, it follows a group of friends while they fight with the ‘other side’. For a critical approach to branding and the series see Stuart Heritage critique published on The Guardian (Heritage 2019).



*(Fig. 5) Polaroid Originals Launch Event, 2017*



## METHODOLOGY AND FIELDWORK

### Methods

When I first started to envision my research project, I assumed that due to the global and digitally mediated nature of today's photographic practices (something I had observed during previous research on a Polaroid picture sharing platform)<sup>22</sup>, much of my fieldwork would have to be based online with in-depth interviews done offline<sup>23</sup>. Accordingly, I prepared myself to conduct research on different social media platforms where I had preliminarily established that most of the activity regarding the circulation of the Polaroid was happening. I expected that this would set my research apart from more traditional fieldwork that takes place in clearly localized sites or fields (Larsen 2008, 153). However, against everything I foresaw, it was not long before I came to realize that offline communities were still out there and very much thriving<sup>24</sup>. This finding shifted the structure of my fieldwork. What I had first envisioned as an online ethnographic work set to analyse the way the practice was being circulated and consumed on social media platforms, became 12 months of fieldwork in which I focused on understanding the way the practice was being consumed, produced and circulated both online and offline, and how the online and the offline realms communicated.

With this in mind, in order to acknowledge the unbounded and global nature of the practice and to avoid overlooking what I felt was one of the main characteristics of the practice of Polaroid (its digitally mediated character), this thesis, rather than being an ethnography of Polaroid practice in London, was conceived as a networked ethnography that would study the circulation of people, objects, knowledge, and skills (Latour 1994; Marcus 1998; Wittel 2000; Farnsworth and Austrin 2010) of Polaroid practice. This methodological approach meant shifting from a more traditional ethnographic method that physically constructs the boundaries of fieldwork (Wittel 2000), both online and offline, to one that took into consideration how Polaroid moves in both these two realms. With this, I do not intend to suggest that the boundaries of networked ethnographies are not

<sup>22</sup> My MA degree dissertation (2015) focused on analyzing the relationship people establish with their cameras. To do so, I went into polanoid.net (the biggest Polaroid sharing platform) to meet practitioners and interview them. During the short period of fieldwork (3 months) I managed to establish that many of the practitioners I engaged with uploaded images into the website knew each other by their nicknames and images, and some even met offline, but there were no organised groups.

<sup>23</sup> I used the distinction offline and online to avoid falling into assumptions that distinguish the Internet from the physical space through the binaries of the 'real' and 'unreal'.

<sup>24</sup> During my fieldwork I only engaged with a London-based Facebook group, yet during this time I became aware of the existence of another group in Italy, which opens the possibility to extrapolate and imagine the existence of other local groups around the world.

constructed, but when envisioning my field I paid special attention to following what I felt were the important nodes in which the practice of Polaroid was being moved, handled, used, and perceived. In this sense, rather than having one single site, I identified certain places that I felt were key for the circulation of the practice. This thesis, then, followed a multi-sited ‘snowball’ effect, where one ‘site’ (The Impossible Project store in London, from now on, The Store) led me other places where Polaroid was being produced, consumed, and circulated, along with the different gatekeepers of each ‘site’. The decision to make this thesis a networked ethnography, then, came after realizing that the study of contemporary photographic practices (or any contemporary practice for that matter) cannot be bounded to any particular site, but must take into account the way offline and online realms inform one another. Still networked ethnographies are not exempt from complexity. Seeing that there is no longer a physically bounded fieldsite, doing multi-sited or networked ethnographies often means sacrificing ‘thick description’ (Geertz 1973, 5; G. E. Marcus 1998, 234) for ‘thin’ ones (Wittel 2000, 21), as there is no physical place in which to base oneself. However, my impression is that the study of contemporary photographic practices (beyond Polaroid) could not be undertaken within a single site due to their mobile, mediated, and global character (Gómez Cruz and Ardèvol 2013, 36). Having said that, carrying out this fieldwork was far from easy. After identifying that London had an active Polaroid ‘scene’, a realization based on the fact that London hosts one of the few official stores of The Impossible Project (the others are in Paris and Berlin, though the former closed soon after my fieldwork started), and has a buoyant cultural life, I decided to embed myself in The Store in order to gain access both to the ‘official’ and ‘unofficial’ practices of Polaroid. Being there allowed me to meet long-term practitioners, but also made me realize that photographic practices, though fundamental for the person who engages with them, were often a side activity. This made me aware that between my time at The Store, and the interviews, there were often ‘dead’ moments in which few activities were happening. This changed however, once I realised that despite not ‘practicing’ full-time, most of my interlocutors were very much active on social media. Hence, most of my 12-month fieldwork was spent complementing one field site with the other, recognizing the fundamental role both played in equal amount.

Working with The Impossible Project store in London gave me access not only to people and other ‘sites’ but also granted me with a certain ‘status’. Whenever I mentioned that I was with The Impossible Project, people were immediately more interested in listening and collaborating. However, working with them was not without its dilemmas. Despite

mostly ‘opening doors’, on a few occasions I met people who, knowing my relationship with The Impossible Project, expected me to grant them access to potential collaborations or get them involved with the company. Also, when discussing the film, I needed to make clear that though working with them, I was not working for them, allowing my interlocutors to be open and honest about their opinions of the products.

## Fieldwork

I spent the first five months of my fieldwork at The Impossible Project London store, the only official site to acquire original Polaroid cameras and film in the UK (fig 6). Due to The Store being located in the technology area of Selfridges department store, set in busy Oxford Street, the nature of the data that I gathered was mixed. While I acknowledge that Selfridges, being a high-end store, meant that the customers (and visitors) it received were mostly limited to a certain economic class, including people not necessarily interested in photography in the way the clientele of a small shop might have been, the central London location meant that I was able to witness something different: the popular perception of Polaroid (i.e. not being restricted to only practitioners or people already familiar with it).



*(Fig. 6) The Impossible Project Store at Selfridges*

Accordingly, being there allowed me to gain a general understanding of peoples' reactions to seeing Polaroid being sold (often disbelief), while also allowing me to meet 'the regulars'. These were London Polaroid practitioners who regularly visited The Store to purchase supplies, to socialize, and gather the most up-to-date news about film and camera development (but would otherwise avoid Oxford Street). Once I began working at The Store and, subsequently, going to The Impossible Projects events around London (and beyond), I became aware that that the practitioners that visited The Store often attended other Polaroid-related events (again, mostly organised by The Impossible Project), and most of them appeared to know each other (fig. 7). Thus, though being at The Store only enabled certain data to be collected, it allowed me to meet 'the regulars' (granting me access to the SCS Facebook group<sup>25</sup>), which later become one of my main research sites (both online and offline). Still, in order to avoid the partiality of the public that went into The Store, I also visited other film photographic venues and assisted with photographic workshops, albeit on a less regular basis. The reasoning behind this was to be able to engage with a broader spectrum of practitioners, the ones that didn't necessarily attended The Store; although, I have to admit that most of the people attending workshops and other unofficial Polaroid events often seemed to be the same ones that visited us at Selfridges.



(Fig. 7) Florian Kaps Demonstrating 4x5 Instant Film at The Photographers Gallery, 2017

<sup>25</sup> The SCS Facebook group is the local Polaroid group I was embedded during my fieldwork. In order to anonymize the group and its people, I've decided to use SCS as an acronym.

Following these five months and once familiar with the community in London, I travelled to Vienna where I spent two months at Supersense, *Home of Analogue Delicacies* (fig. 8). The place, founded by Florian Kaps (former owner of 'The Impossible Project'), Andreas Holler, and Nina Ugrinovich (no longer part of it) is an 'all-analogue' multidisciplinary project that offers different analogue experiences to its visitors. Held in a recently restored Venetian Palace located in Vienna's Second District, Supersense is home to several analogue technologies: different Polaroid instant cameras (including 8x10 and 20x24 inches formats) that users can hire on demand; a master record press for recording both live sessions and audio files into record format; typographic presses (the 1960s Korrex and the 1800s Boston Plate Press) that print posters and other paper-based objects; a scent-memory section (a 2x3 m small room which walls are covered in glass ampules containing abstract smells designed by artist-scientist Sissel Tolaas) allowing visitors to purchase smells to 'scent their memories'; and a café/bar provided with locally-sourced products, among many other analogue-based products and services (calligraphy writing, vinyl video, cassettes, etc)<sup>26</sup>. My decision to become involved with Supersense was not part of my initial research plan. While preparing for my fieldwork, I made contact with The Impossible Project film factory located in Enschede, The Netherlands, in order to spend some time there observing the production of integral film (white frame) and interacting with those who produced it. Yet, soon after I started my fieldwork the factory withdraw their invitation<sup>27</sup>. Supersense therefore presented itself a place where I could still observe film processes and interact with producers, though on a much smaller scale and in a less industrial environment. What made me decide to go, however, was that, after spending time with my interlocutors I became aware that for many practitioners Supersense was considered to be a pilgrimage site. This was on account of its impressive camera collection and Polaroid related services, but was also due to the place being created by Florian Kaps, who in the eyes of practitioners was Polaroid's 'saviour' (this was confirmed by the many Polaroid 'pilgrims' I met during my time there). While being there (two whole months), I was able to witness, for the first time, the technique and materials involved in the production of Polaroid images (particularly medium and large format), among other analogue technologies and enquire about the material and social infrastructures that kept these media operative. This provided a material dimension – the scarcity of supplies, the expiration dates of the chemical pods, the storage of the film – and social

<sup>26</sup> Francis, the shop manager, explained to me that the aim behind Supersense's different sections was to evoke the five human senses.

<sup>27</sup> Though they didn't give a reason for this, I guess that it had to do with timing. That year The Impossible Project made the change to Polaroid Originals, which encompass not only a change of name but also new film and cameras, which I believe they wanted to keep a secret.

dimension – the need for of expertise and knowledge, the circulation sites – to my research on Polaroid which then opened the possibility of thinking about Polaroid practice through the lens of infrastructure.



(Fig. 8) *Panoramic View of Supersense, Vienna*

The last six months of my fieldwork were spent conducting participant observation both offline and online (Hine 2000; 2015; Boellstorff et al. 2012) with the community in London, exploring the relational nature of their connection with a materially-based practice in a digitally mediated world. This included attending both official events organised by The Impossible Project (and later Polaroid Originals), such as *Insta Nights*, and other photographic related activities arranged by the members of the SCS Facebook group, mainly *Polanwalks*, exhibition visits; along with in-depth interviews with members of the group and other London practitioners. During this time, I also focused on social media platforms, mainly two Facebook groups: The Impossible Project<sup>28</sup> (fig. 9), a global supportive network of The Impossible Project (according to the group’s bio); and the SCS group, a London and UK-based group. By bringing my attention to the exchanges and interactions that were happening

<sup>28</sup> Though the name of the group is The Impossible Project and has over 9000 members, it is not officially run by any member of the Company, but by a practitioner. Despite being ‘unofficial’, before The Impossible Project turned into Polaroid Originals, it was usual to see Impossible Project employees answering group members’ queries and engaging with practitioners.

on these two platforms, I was able to gain an understanding of the way the practice was being described and depicted (Hine 2015). This included analysing both the material circulations, that is, the exchange, selling, and advertising of Polaroid cameras and film (among other objects), and the social interactions, where knowledge, skills, and a much-valued know-how enabled new practitioners to become acquainted with Polaroid technology. Moreover, the time I spent online was also useful for recognising other practices that were happening in these sites, such as different crowdsourcing campaigns aimed to support other analogue formats, along with modification (tinkering) practices, open calls to participate in Polaroid related projects, etc. In sum, the time that I spent online made me realize the role that offline responses to online interactions and viceversa (Johnston 2014), along with the fundamental role social media plays in the emergence of the informal infrastructures (both social and material) that sustain the practice<sup>29</sup>.

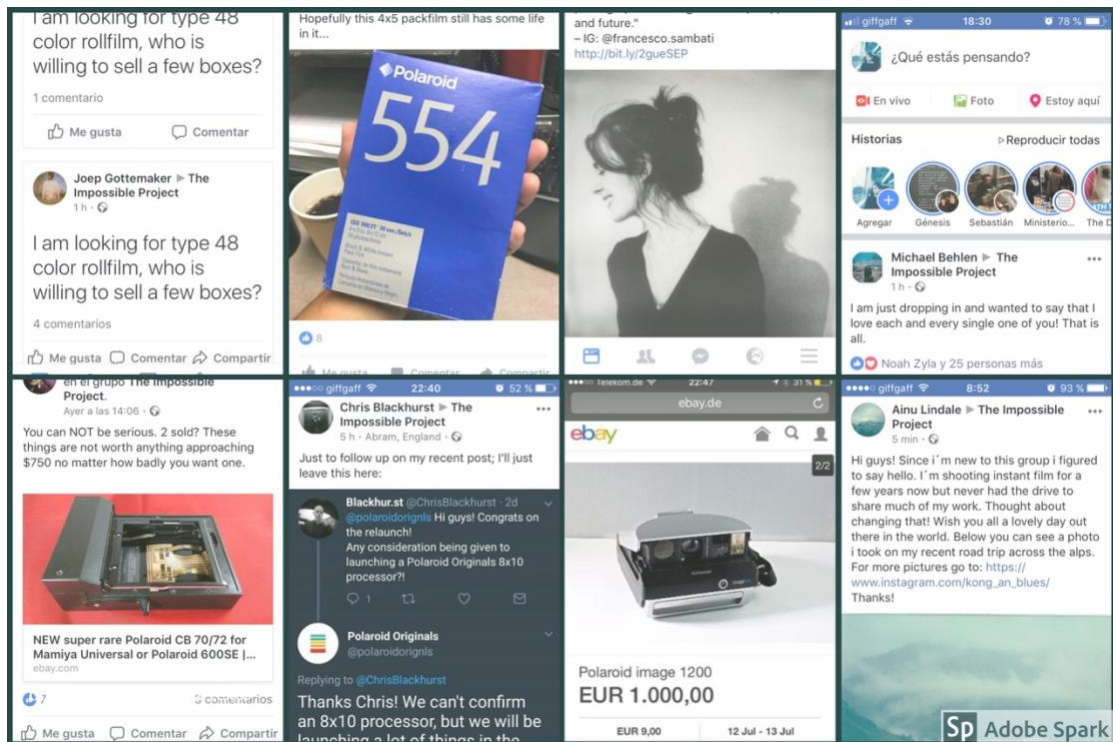
## **The Data**

The data collected for my thesis comes from 12-months of multi-sited fieldwork conducted in London, Vienna, and online in two Polaroid-dedicated Facebook groups (one open, and the other one invite only) between December 2016 and December 2017. For the hundreds of interactions that I had during my time at The Store, I collected data on a small notepad that I took with me every day. There I noted everyday interactions, along with customer, visitors, and passers-by reactions. Similarly, during my time at Supersense, I also took a small notepad with me in which I noted daily interactions, impressions, and ideas that occur to me. My fieldwork notes also included some sketches on how to use certain machines (the 20x24 Polaroid film processor, for example). Besides taking fieldwork notes, I also conducted 25 in-depth interviews. These interviews were semi-structured and lasted, on average, one hour and a half (though some of them lasted over two hours), and most of them were audio recorded. Most of the interviews were conducted in English (with the exception of two), and were transcribed by me. I collated the data of the interviews by identifying concepts and ideas mentioned by the interviewees that appeared to repeat themselves.

During the course of my 12-month fieldwork, though more concentrated in the last five months, I focused on collecting online data. This data was collected using methods such as discourse analysis and note taking, while I also created an archive of screenshots and interactions that I later analysed. Additionally, over this period, I shot hundreds of Polaroid

<sup>29</sup> For an extended selection of images of my fieldwork please see Appendix.

pictures as well as digital ones. Some of this material can be seen throughout the thesis. During the course of my research, I amassed a significant number of photographs, both Polaroid and digital, however, until today, nothing has been done with them. This lack of an open visual outlet for my research images suggests that an important discussion remains about the outcome of non-textual research and how it can be presented and circulated.



(Fig. 9) The Impossible Project Facebook Screenshot



## Thesis Outline

Mimicking the state of the current Polaroid practice, this thesis has been written with both continuities and discontinuities in mind. Rather than offering a unified understanding of what Polaroid is, I have decided to use Polaroid's case study as a heuristic device to explore different theoretical and practical perspectives from which 'old' contemporary media practices can be studied. That said, my thesis is broken into six chapters, each one encompassing one of the many possible theoretical perspectives Polaroid practice (and potentially other old new media practices) can be thought through. The six chapters in this thesis, then, propose six potential ways of looking at Polaroid practice from a material (object-like) aspects and the way they affect and are affected by practitioners. These are, the communal (*Objects of Sociality*) and embodied dimensions (*Objects of the Body*) of the media; its fluctuating and processual nature (*Objects of Becoming*); the ideological production of obsolescence and its affective consequences (*Objects of Obsolescence*); the material and social networks needed to sustain the practice (*Objects of Infrastructure*); and the complex temporal structure their study reveals (*Objects of Temporality*). Each of the thesis chapters, then, is intended to work as a theoretical building block that explores different dimensions of the media object, which expands from that of the transmission of content, or representation, to propose Polaroid as materiality (that is, as a relationality between people and things). By structuring the thesis through these six different perspectives, I am not suggesting that they are the only possible frameworks through which Polaroid's current practice can be analysed, but instead offering the possibility of thinking about the media object from a standpoint that takes into account general assumptions regarding old media, as well as the material and social infrastructures that enable their existence.

**Chapter 1**, *Objects of Sociality*, focuses on the social aspects of Polaroid practice. This is where I introduce the Polaroid community within which I was embedded during my fieldwork; who they are, what they do, and how they think about themselves as a group and about the practice they carry. By rethinking Anderson's "imagined communities" (1965) into the Internet realm, i.e. encompassing both the online and offline communities 'imagined' through material use, I analyse the new social configurations that resulted from the continuation of Polaroid practice. By addressing online activism (in the form of crowdsourcing) through the theory of fandom, I show how the different engagements with the Polaroid object (from personal websites to social media, and blogs) have helped bring geographically dispersed, practice-based groups together. Finally, I propose that social media

is not a complement to Polaroid practice, but a fundamental aspect without which the practice could not exist.

By looking at the material changes Polaroid has experienced (due to the impossibility of reproducing as it previously was) **Chapter 2**, *Objects of the Body*, analyses how these changes have altered the way the practice is perceived and experienced, creating a new practice out of an old one: a new old practice. By drawing on my interlocutors' perception of the embodied materiality of Polaroid (the making of the image as opposed to the taking of it), this chapter challenges many of the assumptions that emerged following the advent of digital technologies, mainly those that arose from the 'tropes of transparency'. Finally, this chapter addresses how, through the process of making an image, practitioners seek to rematerialize the digital object.

Building on the discussion of the previous chapter, **Chapter 3** analyses different digital-to-analogue conversion processes (analogification) in order to address the unstable and variable character of the digital object (challenging the messianic tropes of digitization). In an attempt to grasp these processes, I draw on my interlocutors' anxieties and the lack of agency they feel towards the digital object, and how analogification enables them to reclaim it. Furthermore, this chapter seeks to demonstrate that rather than analogue and digital working in opposition, they work under the logic of supplementarity.

In turn, **Chapter 4**, *Objects of Obsolescence*, starts with the heartfelt case study of Mary, whose Polaroid practice is reaching an end as a result of the complex material conditions of obsolescence facing Polaroid today. By exploring the ideological dimension of obsolescence and how it can be challenged, this chapter looks at the link between obsolescence and nostalgia to offer a critical alternative to the assumption that Polaroid's current practice is only due to market strategies. With this in mind, here, I explore how Polaroid's analogue aesthetics, rather than suggesting a desire for retro-looking images, indicates a critical stance and a re-evaluation of the values my interlocutors believe the 'digital' is imbued with.

With the previous chapter in mind, and by drawing into the case study of the 'breakdown' of a Polaroid camera, and the lack of a 'formal' infrastructures to fix. **Chapter 5**, *Objects of Infrastructure*, explores the 'informal' networks that emerged when the Polaroid Corporation ceased to function. By looking at the way the practice circulates (both materially and socially), this chapter argues for the productivity of 'breakdown' and proposes that without social media platforms (mainly Facebook) and the tinkering practices practitioners carry out, Polaroid's continuation (and current) practice would not be possible.

Finally, **Chapter 6**, *Objects of Temporality* draws on the case study of Mr Cad photographic shop to look at the temporal dimensions that inform the material object. By addressing the link between material culture (technology) and progress, I argue that the encounter of the ‘old’ in the context of the ‘new’ produces a temporal disjunction of the material object, violating the modern understanding of temporality. Following this argument, and by looking into the different discussions regarding the concept of time, I examine how the media object’s time might not correlate to ‘our’ (chronological) time and instead reflect on a different possible model for grasping the temporal dimension of the technical apparatus.

## CHAPTER ONE: OBJECTS OF SOCIALITY

### Flash, Camera, People

On a cold autumn evening in November 2016, I headed towards *Lights of Soho*, a photographic venue in the Soho area of London, where a *Polaroid Insta Night* was being held. This was my first time attending a Polaroid related event, and I was excited to meet the people who practised Polaroid photography. As soon as I arrived, I approached the group from The Impossible Project (who were organizing the event), and whose team I had recently joined as part of my placement at their store in London. As a newcomer, I stayed close to them, observing the place and those who arrived. Most of the assistants appeared to know each other; they chatted animatedly with different cameras dangling from their necks. The *Insta Night* event involved a talk given by photographer, Rhiannon Adam, a Polaroid practitioner and author of *Polaroid: The Missing Manual* (2017), who has been working with Polaroid for a long time (fig. 10). The content of the talk concerned the history of Polaroid photography, particularly the way Edwin Land envisioned instant photography, along with how the practice was embedded with her personal story.

“I grew up in a boat, but because I didn’t have any photographs to show to other kids at school the adventures I had - they thought I was lying. That’s why I started to collect things from the places I’ve been to. That’s when I became interested in Polaroid; it was born in that place. It was unique, affected by temperature, and it made the moment a memory.”

Once the talk had come to an end, the attendees and the organisers cheerfully engaged in Polaroid-related conversation with Adam, while everyone sipped their drinks. Later, the group broke into smaller ones, and I was approached by Carlos, who asked to take my portrait with his 35 mm Leica camera. After shooting it, he promised to email me a copy of the photograph. During the evening, you could see the brightness of the flashes illuminating the dark venue and hear the mechanical ejecting noises made by instant cameras. Despite the fact that we were in a venue in Central London in 2016, judging by the look of the cameras, it may as well have been the ‘80s, and although I didn’t know it at the moment, most of the people that I met that day would become what I later termed, the London Polaroid community.



(Fig. 10) *Insta Night Collage, 2016*

In the introduction to their book, *New Media 1740-1914*, Lisa Gitelman and Geoffrey Pingree note that “the emergence of a new medium is always the occasion for the shaping of a new community or set of communities, a new equilibrium” (2003, xv). Following Gitelman and Pingree’s argument, and with the fieldwork vignette in mind, this chapter introduces the members of the London Polaroid community in which I was embedded during my research and focuses how a geographically-dispersed group of practitioners gather around Polaroid. By concentrating on the social aspect of their relationship with Polaroid practice, I intend to shed light on the social role Polaroid plays in practitioners lives, how this is entangled with the materiality of the camera, and the role the Internet and social media platforms have played in the reinforcement of the practice. Drawing into Benedict Anderson’s concept of ‘imagined communities’ (2016), and focusing on the efforts the global (online) Polaroid community are willing to make in order to secure the continuation of the practice, this chapter address the fundamental role digital platforms had (and continue to do so) in the enabling continuation of Polaroid practice. By looking into the concept of ‘online activism’ (Gil-Moreno 2016), this chapter aims to analyse the socialities that emerge from media technologies (Ginsburg, Abu-Lughod, Larkin 2002), an argument that challenges the assumption that digital platforms create ‘disconnected connections’ (Turkle 2011) that are only temporary and contingent (Seto 2017).

## I. The London Polaroid Community

The group that I have come to address as the London Polaroid community is comprised of a mix between members of a dedicated Polaroid Facebook group, and some other ‘regulars’ at Polaroid-related events in London (mostly organised by The Impossible Project), though at first it didn’t appear as such. At the beginning of my fieldwork, as the vignette in the previous section suggests, I started to notice that the same people seem to gravitate around the events and site of The Impossible Project in London. Including the *Insta Nights* instances in which Polaroid photographers were invited to give a talk, and the officially organised Polawalks<sup>30</sup> around Central London, the Polaroid photographic workshops, and The Store, I started to recognize the same familiar faces, who also began to recognize me.

That said, during one of my afternoons at The Store, I was approached by Ralph, whom I remembered seeing at the *Insta Night* event a couple of weeks ago. Middle-aged and living with his family in the outskirts of London, he arrived at The Store with a big backpack and carrying a Polaroid camera. Swiftly he approached me and asked whether I was new. I took this as an opportunity to introduce myself and my research project, to which Ralph replied by handing me a small square presentation card with his details on one side and a beautiful Polaroid picture on the other. After introducing ourselves, he started chatting with another member of The Store, Peter, who has been there since The Store’s beginning. Soon the two of them appeared to be involved in a lively conversation about the recently launched I-1 camera, The Impossible Project’s first foray into camera production. Immediately, Ralph surprised me with his knowledge of the inner operating of the camera and the focusing mechanism, which he didn’t like that much. After he left (without buying any products, indicating that his intention that day was set on socializing rather than buying), I asked Peter whether he knew him from before, to which he answered, “yes, Ralph is one of the ‘regulars’. There are a few of them who often come at The Store and attend the events we organise.” Following that interaction, another day I brought this up with Jess, another one of my colleagues, to which she told me that not only Ralph was part of the regulars, but that he and Ed, another fellow practitioner, run a Facebook group dedicated to Polaroid photography. I was surprised to hear that there was a dedicated Polaroid group based in London, and excited that maybe, against all my assumptions, I was going to be able to find a ‘traditional’ photographic community, similar to the photographic clubs described by Bourdieu in his sociological analysis of French photographic clubs (1990), or those described

<sup>30</sup> Polawalks is a concept used by the Polaroid London community to refer to Polaroid photographic group walks.

by Karen Strassler in her ethnography on photography in Java, Indonesia, in which members of the same club met and walked around with their cameras (2012).

### **The SCS Facebook Group**

The next time Ralph came to The Store, and this time he was with Ed, I approached them both and tried to engage in conversation. I soon realised that if I wanted to become closer to them my general knowledge of Polaroid photography wasn't going to be enough. I needed to improve my technical awareness of specific details of cameras and film, and hopefully, become aware of some 'juicy' news about film developments and new test batches. Hence, I asked Peter if he could help me become acquainted with the new camera specifications and details. After some training, and plenty of 'wasted' film, I managed to learn a few things about the I-1 (though I could never really handle it, as its focusing system is not only complex but somehow a hit and miss<sup>31</sup>). Soon enough during one of the occasions that Ralph visited us to replace the framing part of his I-1 camera, which I was instructed to deliver, he mentioned the SCS Facebook group<sup>32</sup>, and later that day sent me an invite. The Facebook information described the group in the following way,

“London based group for people interested in Polaroid cameras and photography. Group is invite only and ideally we want to meet in person and socialise (we run Polaroid walks in London and further afield), so apologies if we do not accept international requests.”

Ralph is the administrator of the SCS Facebook group<sup>33</sup> and as such he takes his role seriously. He takes it upon himself to organise at least four Polawalks a year (one in each season) and initiate discussions online about certain camera aspects and other, related photographic topics, such as new film chemistry, developing times, etc. During the Polaroid outings he organised, he always made sure to bring extra cameras and film to let others try them, and it was not unusual for him to organise some 'challenges' during the walks, that is, to take certain motifs, colours, etc., to, in his own words, “make things more exciting.” On

<sup>31</sup> Peter tried to teach me about the three-lens mechanism the camera uses to focus and that due to some design problems are best identified by hearing the lenses shifting inside the camera.

<sup>32</sup> To this date (2019) the SCS Facebook group has 83 members, with most of them living in the UK, and particularly London, though there are a few exceptions of practitioners living in the US and other European countries.

<sup>33</sup> After a while both Mary and Ed were given administrator status so they are allowed to invite people and accept invites.

one of the occasions that I met Ralph, during a cold night in the Winter of 2017, I asked him about the SCS group and its local character in an era in which most practice-based groups seem to be non-geographically bound. He told me that although he engaged with The Impossible Project Facebook group quite a lot, he wanted to have something locally grounded that would enable him to meet people to socialize. This was also the reason why he mainly invited or accepted requests from people from London or the UK, to maintain the group's local character. Even so, his participation wasn't restricted to only the SCS Facebook group. Over the course of my research, I saw him actively engage with the wider Polaroid community (The Impossible Project Facebook group) by helping out new practitioners to get started (for example, advising which cameras were best for 'starters'), assisting fellow practitioners with film or camera troubleshooting (he is particularly well-known within the community for his good results on the I-1 camera and his double exposures), supporting crowdfunding campaigns. Ralph is also one of the most vocal persons regarding the future of Polaroid practice and its role in today's world, distancing himself from nostalgia tropes that are usually associated with Polaroid (see chapter 4). He was also keen on sharing the Polaroid images he took regularly.

"I'm quite passionate about Polaroid these days, I mean I kind of recently...ever since my 'light trail' stuff [images depicting light], I've been really into the whole community (online) and people might be bored about me always doing the same stuff but I'm there and people kind of know who I am. I don't want to have one signature, that's why now I'm doing different things like a double exposure<sup>34</sup>."

Despite having a full-time job as an IT professional and a young family, Ralph always appeared willing to engage with other practitioners to help build the Polaroid community, something that was openly expressed by him on several occasions. For example, after a Polaroid outing, he posted an image online with the following caption: "The community lending a helping hand." Even more, the outspoken support for Polaroid practitioners that could be appreciated online was also present offline in the various events The Impossible Project held in London, where he often defended the film quality as part of a bigger global endeavour to keep analogue technologies going. (Not all the people who attended The Impossible Project events and regularly visited The Store were part of the SCS Facebook

<sup>34</sup> A double exposure corresponds when two images are taken into one single frame creating a juxtaposition of images. There are several ways of doing this on Polaroid cameras, albeit the easier and safest (for the camera) is using a Polaroid Spectra.



group, though they all seemed to gravitate to the same places and share similar interests). Hence, from now on, when I talk about the London Polaroid community I will be referring to the members of the SCS Facebook group or those who gravitated in it without necessarily being members). During my fieldwork I met several members of the SCS group. Out of a total of 83 (69 when I first started), I met around 20 members offline and interacted with many more online. Most of the accounts in this thesis come from a smaller fraction of the group (around 15) that met on a regular basis, and whose accounts will emerge over the course of the dissertation. With this, I do not intend to suggest that this is the only Polaroid community based in London (though to my knowledge, no other exists), nor that the analysis and conclusions that I draw from them represent all Polaroid practitioners, but that amongst Polaroid users there is a sense of community that stems from, and is reinforced through the practice of Polaroid.

### **Polaroid Walks**

The first Polawalk I attended was on a cold winter Sunday. I had been part of SCS Facebook group for a few months, when one day, while going through my Facebook feed, I received a notification inviting me to assist on a *Winter Polarwalk 2017* that proposed to “explore Brick Lane and Shoreditch, shoot some Polaroids, eat and chat.” That day several members of the group met at noon just outside Liverpool Street Station (fig. 11). As everyone started to arrive, and with many of us having never met offline before, the only way of recognizing each other was by the rather bulky cameras bags and Polaroid cameras hanging from our necks or shoulders. While we waited for all the attendants to arrive, people introduced themselves (often accompanied by expressions of surprise due to people having already interacting online) and showed their cameras, along with the other additional equipment and film they had decided to bring that day. The conversations included the acquisition of new cameras and accessories, latest film photography related news, and the quality of later film batches, among other Polaroid-related topics, such as Carlos recently breaking his Polaroid 680 camera by accidentally banging it against a wall, with everyone agreeing on the tragedy this was, seeing that they are scarce. Once the group was complete, we walked towards busy Brick Lane and arranged ourselves in smaller groups shooting spontaneously and talking, while others grabbed some food. Some, like Ralph, Ed, and Carlos, enjoyed taking portraits of people around the area, many times giving away the pictures they have recently made to the photographed; while others, like myself, preferred shooting urban landscape or simply ‘stuff’. After shooting for most of the afternoon, and since the day was coming to an end

(and Polaroid film is not very sensitive to light) we headed towards a pub, where we were met by Heinz, The Impossible Project Store manager and avid Polaroid shooter who usually made an appearance during the unofficial events organised by the SCS group sharing film and latest news. Once in the pub, I found myself sitting next to Mary, a middle-age photographic practitioner who wasn't afraid to passionately express her love for Polaroid and other instant-related film formats. After I explained to Mary about my research and how I wanted to grasp the role of the community in the continuation of the practice, she told me about the importance the community had for her, and the way activities such as the Polawalk were a fundamental part of how she envisioned her practice. However, after lovingly remembering that time, she observed that the recent changes in the management of The Impossible Project (mainly Kaps no longer being head of the Company<sup>35</sup>) had led to a lack of engagement from the company and Polaroid users, something she deeply disapproved of as being contrary to the nature of the practice. Mary recalled when The Impossible Project started the community had had a fundamental role in supporting them by buying unstable film that provided less-than-acceptable results, and offering direct feedback to the factory, something that Kaps was keen to acknowledge when I interviewed him over the summer (see chapter 4). In her eyes the new management appear to neglect them.



*(Fig. 11) Brick Lane Polawalk, 2016*

<sup>35</sup> At some point during 2015, Florian Kaps left the direction of The Impossible Project. Though the official version is that he wanted to pursue other analogue-related projects, the rumour is that Kaps' was considered to be "too romantic" (when it came to Polaroid) to run the project in a profitable way.

That day, before heading back to our homes the group made a final stop. Following Mary's avowed 'sweet tooth' we headed towards the nearest coffee shop to have some coffee and cake. Once we were all sitting around a small coffee table, Ralph suddenly remembered that day's challenge: to shoot 'something red'. What followed was a table full of Polaroid pictures containing a red item, and an open discussion about the favourite ones (first and second place got a free pack of film of choice provided by Ralph). Between compliments, coffees, and cakes, the conversation shifted from the pictures towards the group and the community. I remember they mentioned the feeling of sharing the same passion, regardless of place, and even more, the role online communities have had for them, introducing them to a practice but also to other fellow practitioners. Regardless of their words, that day I saw and experienced a huge sense of camaraderie. Like me, many were only meeting offline for the first time. Some had been shooting for years, while others were new to the practice and didn't own a camera, something that was of no issue as members were happy to lend cameras and film to any newcomers. At the end of that day, Mary mentioned how this shared passion and camaraderie made her feel they all belong to the same 'tribe'.

### **Polaroid Practitioners**

In *Photography. A Middle-Brow Art* (1990) Pierre Bourdieu argued that the practice of photography serves a social function by aiding social positioning. By distinguishing photographic taste (aesthetics) and attention to the technical apparatus made by the different French classes (peasants, *petit bourgeois*, and upper classes), he argued that to understand the meaning and function of photography is to understand the relationship to its class condition (Bourdieu 1990, 16). Following the analysis of collected data, Bourdieu concluded that photography has a social function, that is, the "solemnization" and "memorialization" of family with most people rejecting aesthetic aspirations of the practice (Ibid, 57); although these functions were contested by certain 'deviants' – camera clubs, artists, and professionals – who reject the traditional function of photography (Ibid, 103). Castel and Schnapper, collaborating with Bourdieu's photographic analysis, argued that camera club members can be divided into two groups, those who are aesthetically driven and those who are technologically driven, with photographic education guiding photographic choices (Ibid, 109). In this way, working class members of photographic clubs are driven by technical processes while the *petit bourgeoisie* and upper classes are driven by an aesthetic vocation (Ibid, 127), which suggests that despite deviating from the functional role of photography, class values are still reinforced through photographic choice.

Despite the enormous value of Bourdieu's analysis for the sociological understanding of photographic practice, due to the massification of photographic practices and the digitally mediated nature of today's photographic practices, the London Polaroid community and the online global one are hard to typify in the same way. With ages that range from the 20s to mid-70s, and jobs varying from professional photographers, designers, to IT-related careers, accountants, entrepreneurs, students, and among other jobs, it is hard to say that there is a commonality that links them, albeit most of them (though not all) have some sort of job qualification. For example, Mary work as an accountant, while Silvia moved from another EU country to work at a technological start-up, and Max is an employee in a printing service company. There is a proportion of foreign members that happen to live in London due to work or study, most of them coming from other European countries, though a few members currently don't live in London or the UK but belong to the group due to previous acquaintance. On top of sharing an interest in Polaroid photography, most of the London Polaroid community share a passion for other photographic formats, such as digital, 35 mm, pinhole, and medium format photography. Many of them also enjoy film and TV series, with some also participating in gaming activities (computer or console-based), while others practice sports, or other creative activities in their free time. Nonetheless, following interviews and their social media activity, photography, and Polaroid, appear to be their main activity outside of work.

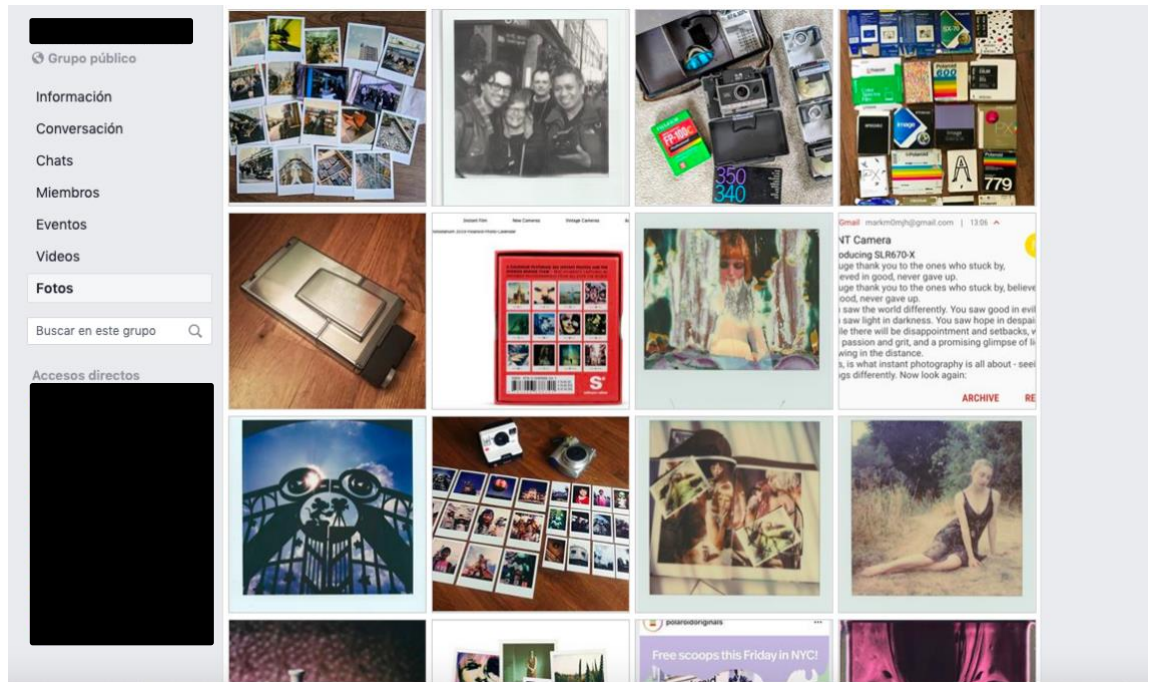
Given the cost associated with shooting Polaroid (a pack of film costs £17.99, averaging £2.2 per picture), evidently most of them have a certain amount of disposable income to spend on film and other photographic equipment. That said, it was not uncommon that when a Polawalk was approaching, some would mention not having money to buy film or only having a couple of packs in hand; or, while discussing certain film formats, people would state they couldn't really afford any others at the moment. While disposable income was a characteristic that most practitioners shared, there was always a rationale present at the moment of shooting.

Moreover, despite them belonging to the same photographic group, contrary to the conclusions made by Bourdieu in *Middle Brow Art*, the London community didn't seem to be fixated on certain photographic motifs, nor on certain types of cameras. Broadly speaking, most of the images uploaded in the SCS Facebook group can be considered as what Bourdieu defined as aesthetically driven. However, this aesthetic drive was strongly linked to the technical aspects of the Polaroid camera and the resultant materiality of the image (see chapter 2 and 3). For example, Ralph's light trail and double exposure images often depicted

abstract or ‘functionless’ motifs (as understood by Bourdieu) and are only possible due to the technical aspect of the camera – covering the light sensor for a long exposure shot or tinkering with the mechanism so that the film is not ejected, respectively. However, despite the experimental nature of the images, most practitioners were still involved in family and social picture taking. Thus, contrary to what was observed by Castel and Schnapper in relation to photographic club members deviating from traditional photographic motifs (Bourdieu 1990, 105), the SCS group members had no desire to deviate from them; social images were posted along more experimental ones (fig. 12). For Polaroid practitioners, rather than reinforcing class values by contrasting the aesthetic and the technological (Ibid), the images they took bridged together aesthetics and technology, experimental and functional, into the practice of Polaroid image-making. More evidently, what distinguished Polaroid users from the categories observed by Bourdieu is the importance they assigned to the process of picture taking rather than the resultant image, which encompassed, along with the material and the processual (see chapter 2), a fundamental social aspect.

Furthermore, and addressing Bourdieu’s distinction between amateurs and professionals (in which the latter received photographic education and are able to navigate the photographic circuit), during the course of my fieldwork I never heard practitioners using the ‘amateur’ category, and ‘professional’ was used to define photographers who earned their living through photography, which in the case of Polaroid is very unusual (as there are not many jobs that commission this format). Still, I did observe some behaviours that demonstrated an ambition of breaking the ‘hobby’ barrier – a couple of SCS group members carried business cards depicting Polaroid images taken by them – still, the majority of the members enjoyed taking images on a non-professional level, with some arguing that Polaroid enabled them to disconnect from the productivity associated with other photographic formats such as digital. As such, though some members did run some dedicated websites for exhibiting their practice, and sometimes showed their work in Polaroid-related projects, the amateur/professional division was not present. Anyone with a Polaroid camera could at some point showcase their work (without them necessarily being ‘professionals’). This, as Gómez Cruz argued, is related to the transformations brought by digital technology and the users’ ability to produce and distribute their own content (Gómez Cruz 2012, 210), which suggests that photographers do not need to make these distinctions anymore as they are able to upload and distribute their images on social media platforms such as Facebook and

Instagram<sup>36</sup>. Due to this complexity of ascribing Polaroid users to already existing categories, or creating new ones, I decided to define Polaroid users as practitioners instead of other categories such as ‘aspirational amateurs’ (Minniti 2016, 18) or ‘amateur pro’ (Gómez Cruz 2012); while the concept of ‘practitioner’ also accounts for the practice-based approach deployed in my research.



(Fig. 12) SCS Facebook Group Screenshot

However, the transformation of Bourdieu’s categories (Gómez Cruz 2012, 210) is not to say that the members of the SCS group and the Polaroid community were not in search of legitimation. This is something that Peter Buse discusses in his book *The Camera Does the Rest* (2016) while pondering the success behind *The Impossible Project*. Regarding this, he concludes,

“Now that the power and pleasure of image-making are in so many hands [due to digital photography], it may be that its value has diminished. So in the first decades of the twenty-first century analog has found a new function. Everyone can do photography, but not everyone, in fact hardly anyone, is doing analog. In its very obsolescence lies the secret of its continuing survival” (2016, 221).

<sup>36</sup> Many Polaroid practitioners uploaded their images both onto their personal Facebook and Instagram accounts as well as sharing them on the official ones which enabled them to exhibit their work.

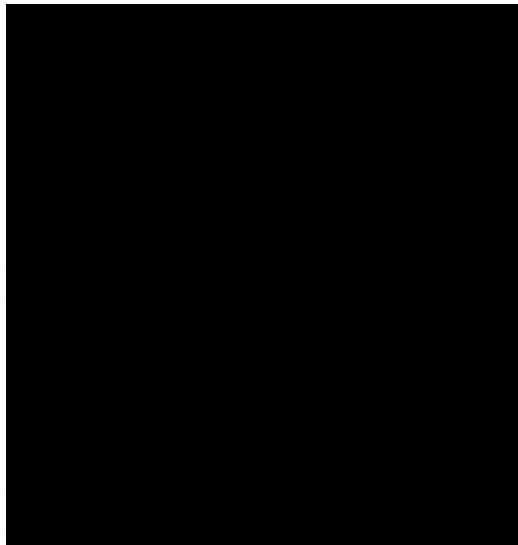
Despite not agreeing that obsolescence is what has granted Polaroid its survival, I do agree that the presumed obsolete status of Polaroid photography often granted practitioners a certain leverage at the moment of taking pictures. This can be observed in Ralph's account below,

“If I walk around with a digital camera and asked someone for their picture they will be like, ‘what do you want it for?’, if I walk with a film camera, it is slightly better. Now, if I do it with a Polaroid, they will be like ‘no way, that is amazing’, and it will start a conversation. 9/10 times I will get a yes [for taking people's picture].”

What Ralph's account suggests is that there is a transformative power in carrying a (Polaroid) camera (Forrest 2016, 194) that in this case was granted, on the one hand, by the ‘rarity’ of the medium (for an extended analysis on this, see chapter 4) and on the other hand, by the materiality of the camera – mainly its instant character – making it a ‘conversation starter’. When shooting people's portraits on the streets Polaroid seemed to operate according to a system of reciprocity which emerged between the photographer and its subject, a reciprocity that is paid by the gifting of Polaroid images. For example, during the summer of 2019, Ralph posted on the SCS a series of Polaroid pictures he had recently taken at Notting Hill, London. One of the images he posted depicted a man next to a bright coloured mural of Trinidadian activist Leslie Palmer. Ralph explained how the man asked him to take a picture with his mobile phone, yet Ralph offered to take a Polaroid picture instead. After shooting and gifting the image, he realised the man turned out to be Leslie Palmer himself, who left with a Polaroid picture. Another example of this reciprocity happened during Wim Wenders Polaroid exhibition at *The Photographers Gallery* (London). During the opening of the exhibition, it was announced that the filmmaker himself was going to be signing the catalogue of the exhibition, an occasion that drew many members from the London Polaroid community. The day we attended, I happened to be carrying my Polaroid camera, so when it was my turn to have my book signed, I asked Wenders for a picture. He happily obliged, although he asked me if he could also have one; that day we both left with a Polaroid portrait (fig. 13). The interest that Polaroid provoked in people and the capacity to see the picture straight away, thus, created an intimacy, a subject-photographer relation that doesn't exist with a regular camera (Bonanos 2012, 73), shifts the power relation of the photographer and its subject<sup>37</sup> (Sontag 2008, 2) into a balanced act. Even so, these exchanges were not restricted

<sup>37</sup> In her book *On Photography*, Sontag argues that “to photograph is to appropriate the thing photographed” (2008, 2).

to well-known personalities but happened regularly when one asked to take someone's portrait. Gifting a Polaroid, thus, worked as a token of appreciation, as a way to spread the Polaroid 'passion', that is, to 're-enchant' people with analogue instant photography (which is why it was used at The Store as a way of attracting people into Polaroid). These actions were only possible due to the material specificity of Polaroid, its capability to produce instant results: an image ready to be gifted – which is why Buse defines them as ready-made gifts, a social networking camera (2016, 103).



(Fig. 13) *Wim Wenders' Polaroid*

## II. Polaroid Dot Com

It has been claimed that media technologies, specifically digital ones, restrict sociability. This was the argument advanced by Sherry Turkle in *Alone Together*, a book in which after extensively observing machine mediated technologies (2011, 3) and the way people interact with them, she set to discover both the implications of robotic technologies as companions to people, and the effects of digitally mediated exchanges on human relations (2011, 25). For Turkle, (and in contrast to her optimistic argument made in the 1980s about the potential of computer technologies), in networked media platforms, “we enjoy continual connection but rarely have each other's full attention. We can have instant audiences but flatten out what we say to each other in new reductive genres of abbreviation” (Ibid 280). Turkle argues that, although people bond in online communities, these bonds do not prosper mostly because



the Internet operates as an escape or substitute, “I use the word ‘community’ for worlds of weak ties” (Ibid 239). Turkle’s argument can be seen as a response to media theorist Marshal McLuhan’s optimism towards electronic media and the new collective identity it enabled. According to McLuhan, “print [was] the technology of individualism” (1962, 158), while electronic media has enabled “tribal associations, and various forms of virtual (and possibly global) communities” (Strate 1995, 87).

Considering the discussion regarding media technologies and sociality, and drawing on the data collected during my fieldwork, this section seeks to prove that social media platforms have the capacity to enable new social configurations (Marvin 1989; Gitelman and Pingree 2003; Gitelman 2006) and enrich participants’ social life, rather than being a substitute for face-to-face interactions (Turkle 2011, 13). With this argument, I expect to bring a more nuanced perspective to Turkle’s consideration of online communities only producing ‘weak ties’, and propose instead that online communities have the potential of binding people into collectivities, turning them into productive and enriching platforms for those involved.

### **Mediated Communities**

As described in the Introduction, when the Polaroid Corporation announced they were ceasing film production the first reaction that came from Polaroid practitioners was that of a global outcry, seen in the creation of several online platforms and petitions. This global outcry not only managed to save the last Polaroid factory (see next section), but also gave rise to a global community that continued to be connected after the event.

In 2005, in an attempt to secure the practice by supporting film production, Kaps and Hoeller created *Polanoid.net*, “a ‘Polaroid only’ online picture-sharing platform” (Kaps 2017, 126). The website, with 27,400 users, and 343,600 pictures uploaded to date (July 2019) aimed to create a “place to meet, connect, and get to know each other” (Ibid), and came long before other social media platforms such as Facebook or Instagram emerged. In a previous research project I carried out on Polaroid, I interviewed several practitioners that I met through this website (fig. 14). During the interviews, though many downplayed the social role of *Polanoid.net*, it transpired that many met offline after interacting online, sometimes establishing long-lasting friendships with other practitioners. In one particular case, a group of three *Polanoid* members ended up sharing a photographic studio in London after meeting on the website and continued to be friends long after. One of such accounts was made by Steve, who endearingly remembered the time when *Polanoid* first arrived.

“It was a lovely little spot. If you go on *Polanoid.net*, around 2007, it was amazing, now you get only like 5 pictures a day [upload] but then there were hundreds going up, with these amazing pictures that all these artists were just putting [online]. It was so lovely; I can imagine lot of people missed that. You will never see it again. There were a lot of people from France and Italy.”

Since *Polanoid.net* was created though, other platforms have been established for Polaroid practitioners to build practice-based communities. Mary remembers that at the beginning of her practice, around 2008, Flickr – which according to their website is, “almost certainly the best online photo management and sharing application in the world” – was a source of knowledge, skills and the opportunity to engage with other fellow photographers (though later she migrated to Facebook due to Flickr being sold to Yahoo). Mary reckons the Polaroid communities she engaged with online are a fundamental motivation behind her practice. For her,

“It’s the friendships as well [what makes Polaroid special]. I have friendships with people that I have never met. Most of them have derived from the community of film [photography]. People that for the most part think the same, we care about the same things.”

Despite Mary’s account describing what Turkle would call “weak ties”, for Mary, her digitally mediated interactions not only enable sociality but have become a fundamental aspect of her photographic practice, which is something echoed by Max, a member of the SCS Facebook group, who told me one of the main reasons he shoots Polaroid is because he “enjoys meeting like-minded people”. This sense of community and collectivity, however, was not restricted to the local character of the SCS group, and expanded into other groups that were not geographically grounded. For Mary, it wasn’t the SCS in particular that created this sense of belonging: in her own account, it started with Flickr, and later migrated to The Impossible Project Facebook group. Though much larger and global (7000+ members), this group still allowed members to feel part of a community, albeit one that was fragmented and diverse. Among the thousands of interactions that I witnessed on this Polaroid global group, most of them were Polaroid pictures, though many gravitated towards helping other practitioners with troubles with camera/film or any sort of information that might not be easily available (see chapter 5). An example of this type of interaction: “hi people, does anyone know a good place to buy second-hand Polaroids in Berlin. I saw so many at the flea market but I rather

be save (sic)?” Or towards displaying pride or love towards the practice: “Hey, Polaroid enthusiasts, have you already pre-ordered the forthcoming book: ‘Polaroid...’ 272 pages on the subject we all love :)” Other forms of reinforcing community, and love for Polaroid, was ‘defending’ the practice from critiques. Due to the unstable character of the film (see chapter 2), some people at The Impossible Project group took it upon themselves to vocalize their dissatisfaction. Posts ranting about the “unsatisfactory results” or “horrible film results” were not rare, though they were often made by a few known members of the group. These comments, however, often received hundreds of responses ‘defending’ the film and The Impossible Project (as a company). “[The film] is a work-in-progress”, “I love these imperfections”, “this is what makes the film unique”, were some of the answers these comments raised; while other more vocal members advised “learning how to shoot” or simply, “don’t shoot if you don’t like it”. Overall, the ‘defence’ of the practice in response to negative comments worked as a way of reinforcing people’s passion for the practice rather than deterring them, and bringing a stronger sense of community among those arguing in favour.



(Fig. 14) Polanoid Screenshot<sup>38</sup>

With my interlocutors’ accounts in mind, rather than focusing on a pessimistic perspective in which media technologies pull people apart, the next section focuses on the way new technologies facilitate new social configurations (Ginsburg, Abu-Lughod, Larkin 2002:2),

<sup>38</sup> <http://www.polanoid.net/>

which, in the case of Polaroid, has enabled communities to exist and engage in practices that turn them from passive consumers into active participants.

### **Online Activism**

When The Polaroid Corporation announced they were ceasing film production, users around the world shared an emotional response which was visible through the different campaigns that sprung up simultaneously in different sites around the globe. The most well-known example of this is The Impossible Project, founded by Kaps after unsuccessfully trying to persuade the Polaroid Corporation to keep going, although smaller-scale efforts run by practitioners also took place. Recalling this moment Kaps told me, “We were supported by our friend Paul Telford and maybe more importantly a growing crowd of Polaroid lovers out there, gathering together on online platforms like the famous [savepolaroid.com](http://savepolaroid.com)<sup>39</sup>, initiated and mainly driven by my wonderful friends Anne and Dave from New York” (2016:186). This website was simultaneously met with [save-polaroid.com](http://save-polaroid.com) created by Rhiannon Adams. This emotional response or ‘fan outcry’ (Fraade-Blanar and Glazer 2017, 53) pleading for potential investors to keep the practice going, ultimately managed to save the last Polaroid factory, turning passive practitioners into active ones. This way of connecting, only possible due to social media platforms that connected geographically-dispersed practitioners, took different forms, from campaigns, signature gathering, to crowdsourcing and crowdfunding, making the network of practitioners visible. According to Best and Neiss, crowdsourcing is a system “of pooling the financial resources of many individuals to convert an idea into a project or business” (Dresner 2014:3). In the last decade, crowdsourcing has been widely used by start-ups, entrepreneurs, and even long-time established companies in order to gather the necessary resources or support for the completion of a project or commodity (for example, the photographic Kickstarter campaign launched by Lomography<sup>40</sup> in 2017 to produce the ‘Instant Square’ camera).

In her study of activism in the digital age, Elena Gil Moreno discusses the social movement changes brought in by new technologies (2016, 192) and draws a distinction between analogue and digital activism. Following mass theoretician Le Bon, who, writing about the social context at the end of the nineteenth century regarded masses as irrational and

<sup>39</sup> The website doesn’t exist anymore, and it can be argued that potentially other websites that were established with the same aim have perished with time.

<sup>40</sup> The Lomographic Society International, also known as Lomography or Lomo, is an Austrian Company founded in 1992. It became known as the sole traders of the LOMO LPC Soviet Camera, yet later developed their own cameras and films. Today Lomography is known for its ‘low’ and playful analogue aesthetics.

passive (Gil-Moreno 2016, 193), Gil-Moreno draws a distinction between Le Bon's analogue activism and new digitally mediated activism. The latter, linked to Rheingold's concept of smart mob<sup>41</sup>, in which "people who are able to act in concert even if they don't know each other" (2002, xiii), conversely is seen as intelligent, active, and rational. Through new social media platforms, such as Facebook and Twitter, social movements are "increasingly horizontal, deliberative, with apparently greater capacity for incidence and impact on the real world" (Gil-Moreno 2016, 199). Following Gil-Moreno's understanding of digital activism as having the capacity to incise beyond the online realm, I pay close attention to Polaroid's collective effort to save the last factory (and the practice as a whole) as clearly demonstrating the way digitally mediated social movements, which are both local and global (Castells 2012), constitute a technological "relevant social group" (Minniti 2016, 35) which is organised to resist obsolescence. It also shows how obsolescence can give rise to communities.

Even so, Polaroid's 'save the last factory' endeavour was not restricted to this particular case. On March 2016, I was going through my Facebook feed when an alert popped-up. Francesco Gasperini, someone until then unknown to me, had started a *change.org* campaign titled, *Save Fujifilm FP100C Instant Films* (Gasperini 2016). The campaign aimed to congregate enough people in order to pressure Fujifilm, the Company in charge of manufacturing the film, to stop the dismantling and discontinuation of *FP100C* film production (the only film compatible with Polaroid pack film cameras). The campaign, which started with one young Italian practitioner, had thousands of signatures by the end of its first day and soon managed to get Florian Kaps on board. With the joint forces of the Polaroid global community, "the entire world of photography" as advertised by Gasperini, and Kaps' experience with 'saving' film-formats, the campaign took a step forward into a hard negotiation between Kaps, representing the whole 'pack film community' and Fujifilm. To keep supporters up to date, Kaps created a blog, *Save Pack Film travel blog, join Doc on an instant adventure (savepackfilm.net)*. The very first entry read as follows,

"Sitting here at the airport and looking at the plane that will soon take me to Tokyo, I take my very first picture of this journey. Slowly peeling it apart I cannot help but getting sentimental and remember my last "pack film journey" a few years ago (...)  
Now, hopefully the outcome of this journey will be much more positive. But honestly, when I think about the days ahead, I do feel big respect, a little bit of fear

<sup>41</sup> Howard Rheingold's smart mob concept emerged from his analysis of the use of SMS (short message service) in activism.

and also a lot of pressure on my shoulders even if I always try to convince everybody that IMPOSSIBLE is my best specialty... I simply have to find a good way to win the trust of the Fuji[film] management. Because this time we are talking about the very last machines for this wonderful instant film material, and if I fail this iconic beauty will be gone forever.”

In the campaigns founded and in the words written by Kaps it is possible to see the active role practitioners are willing to take in order to secure the continuation of the practice, but also the way in which these campaigns work as a way of making practitioners feel part of a community, rather than simply consumers (Gil Moreno 2016, 206). With this in mind, what the Gasperini's *change.org* campaign established was the possibility of making this online collective engagement visible and widening the interconnectivity that the practice had before the campaign. The campaign advocated for the continuation of a practice that, according to practitioners, was being made obsolete by an arbitrary decision, blurring once again the line between consumer and producers. Accordingly, although the last Polaroid factory wasn't technically saved by crowdsourcing in the form we think about it today (with people around the world pooling resources online), the collective engagement of the global Polaroid community and their online appeals emphasize that the endeavour was not the project of a single 'crazy man', as he told me he is often depicted by the media, but that of a global community that albeit digitally mediated, still depicts a "collective hive mind" (Busse and Hellekson 2006, 8).

Although eleven years have passed since Florian Kaps and Andre Bosmann saved the last Polaroid factory in Enschede and funded The Impossible Project, Rhiannon Adam's website continues to be *save-polaroid.com*. Though she didn't explain the reason for this, I intuit that it has to do with both the precarious state of the technology and the need for acknowledging and commemorating a moment in Polaroid's history in which practitioners felt compelled to join in a common cause. Similarly, though only a couple of years have passed since Fujifilm announced the discontinuation of pack film, the Polaroid community continues to look for alternatives in the dedicated websites (with a few projects appearing and disappearing every few months). Thus, rather than falling apart after the event (Seto 2017, 6) these sites continue to be 'hubs' where practitioners meet to share their practice. The reason for this highlights the ongoing nature of digitally mediated campaigns (Postill 2008, 421) and confirms that the commitment of the community extends far beyond the purely contingent into steadily elaborated practices that secure Polaroid.

### III. Performing fandom

Ed is what many would consider, in his own words, a hard-core fan<sup>42</sup>. Designer, photographer, and foodie, Ed shoots Polaroid photography because, among other things, “it gets the job done” and helps him unwind from photographic post-production processes that his job as a designer and digital photographer requires. Ed, who’s has known Ralph for many years, is the one that initiated him into Polaroid practice, and, as many of the other people I worked with, is a constant presence both in the SCS and The Impossible Project Facebook groups. During one of the times I met Ed, he proudly told me he owned at least 20 Polaroid cameras (among other brands), and that his collection was an ongoing process. This comment was later emphasized by a post he made in the SCS Facebook group which comprise two pictures depicting a row of SX-70s cameras with the following caption: “Family photo. Yeah, OK, I am a bit of a fan. All in excellent condition, fully functioning, serviced by Mint and in regular use” (fig. 15).



(Fig. 15) Ed's 'Family Portrait' Screenshot, © Ed

<sup>42</sup> During the course of my fieldwork my interlocutors used the word fan constantly to either define themselves or the activities they engaged with, though mostly on social media. Hence, fan is an emic category that I uncovered during my fieldwork.

Similarly, in one occasion, Ralph posted on the SCS group a picture of his recently designed *Duochrome Spectrum Film* along with some lines explaining that the prototype was intended as “a homage to the experimental/creative days of TIP<sup>43</sup>” (fig. 16). According to him, the idea behind this pack of film had been in his head for over a year, and comprises a combination of four types of available duo-chrome film<sup>44</sup> enabling photographers the chance to use different films in one single pack (as opposed to single-coloured ones offered by The Impossible Project). Ralph’s duo-chrome film project – from the idea to the hand-packing of the film, the designing, and the construction of the prototype – blurred “[the distinction] between fans and fan object, between who is the creator and who is the consumer” (Fraade-Blanar and Glazer 2016, 19).

Nonetheless, these displays of fandom, in which practitioners create communities around a common object, were not restricted to Ed and Ralph or smaller interactions held in the SCS group, but were also prevalent in The Impossible Project Facebook group, where members constantly posted about their camera collections and new acquisitions. One example of this (though thousands happened) was one user posting a picture of his newly acquired Polaroid 600 camera and a tower of packs of film with the following caption: “not exactly one step 2 [camera] but I am so happy!” Similarly, another one posted a picture of a boxed Instant Lab (see chapter 2) along with, “look what I just got!!! I can’t believe I actually was able to source one of these. They seem so hard to come across around...” While other examples included members expressing, “the new PO SX-70 colour film is an absolute dream. No streaks & intense colour, I’m a fan!” or, “hello my fellow instant film fans! I need your help...”

<sup>43</sup> TIP stands for The Impossible Project.

<sup>44</sup> As the name suggests, duo-chrome film is a two-colored tinted film created by The Impossible Project. At the time of Ralph’s project, duo-chrome film ranged from yellow-black, cyan-black, orange-black, to red-black.





(Fig. 16) Ralph's Duochrome Spectrum Prototype, © Ralph

One way of grasping the extent of Ed and Ralph's commitment and efforts to secure the continuation of Polaroid practice is through the concept of fandom. According to Fraade-Blanar and Glazer, "fandom refers to the structures and practice that form around pieces of popular culture" (2017, 17), in which people bond over an external object. Gray, Sandvoss and Harrington argue that through fandom, people "explore key mechanisms through which we interact with the mediated world at the heart of our social, political, and cultural realities and identities" (2007, 10). Though a pre-digital phenomenon, fandom has been catalysed by global connectivity, with "Internet remov[ing] the final [geographical] barrier" (Fraade-Blanar and Glazer 2017, 9). Through online platforms, such as dedicated forums and Facebook groups, consumers are able to build their communities around common interests, while still permitting them to gather in smaller groups locally (Busse and Hellekson 2006), as the case of the SCS Facebook group suggests. In their analysis of fandom, Gray et al., suggests that it needs to be understood as "a cultural practice tied to specific forms of social and economic organization" (2007, 9). According to Grey et al., fandom is inscribed in a context of global capitalism and mass consumption, which is why Fraade-Blanar and Glazer associate it with a "population whose delayed family responsibilities give them more money to spend on entertainment and nonessentials" (2016, 74). However, this understanding of fandom has created the assumption that fans come from privileged backgrounds that allow

them to spend money on film, and somehow replicate social and cultural hierarchies, which has resulted in a narrow view of fandom practices. The extent of Ralph's involvement with the practice, in which he not only expends money, but more importantly, energy (Fraade-Blanar and Glazer 2017, 32) suggests that fandom goes beyond notions of consumerism into one of commitment. In this sense, Ralph, a father of two and holding a full-time job as an IT professional, demonstrates that although the practice demands an engagement with consumption – by buying the necessary film for the camera to work and sometimes cameras or accessories – the main focus is not purchasing the “best” or “newer” cameras, to reinforce a social distinction (Bourdieu 1990), but to keep a steady flow of film that enables him to shoot. The cost associated with shooting Polaroid, as argued already, was something that most practitioners confessed to be worried about. The cost of the film was a big issue that resulted in making the practice a highly rationed one, and, for some, reserved for special occasions only. Of course, this was not the case for all. A few members of the group would shoot less consciously of cost, “burning” through packs of film, yet this was the exception. Hence, although delayed parenthood and disposable income can be considered as economic factors that enable the performance of fandom, it cannot be said that the practice is motivated by it; most of the Polaroid practitioners with whom I engaged, were constantly worried about costs.

Even more, the understanding of fandom only through economics, dismisses the material dimension of the object as well as the power fans have to alter market's decisions. Steve, a long-term practitioner from the south of England with a working-class background who has made of Polaroid his main source of income by up-cycling and reselling cameras and other photographic goods online, could hardly be considered as someone who engages in practices of conspicuous consumption (Trigg 2001; Veblen 2005). Self-defined as a Luddite, he hardly spends on anything new and confidently relies on fixing and tinkering in order to extend the life of his goods, something he told me has to do with being the son of someone who experienced scarcity during the after-war period. Thus, for Steve the relationship he establishes with Polaroid, and everything else for that matter, is one of deep care, fixing the cameras over and over to extend their ‘life’ (see chapter 5).

### **Every day and Resistance Fandom**

Furthermore, with the blurring of the distinction between consumer and producers in mind, the performance of fandom can be both understood as an everyday and as resistance practice. In the case of fandom of the everyday, always carrying cameras around reinforces

the importance of the lived experience of the practice as opposed to the image (Forrest 2016, 197; Gómez Cruz and Lehmuskallio 2016). One example of this were the pilgrimages that I witnessed during my time at Supersense. During one of the occasions I was there, a group of people sat at one of the tables, drinking coffee while reviewing some Polaroid pictures. They had planned this short trip for the summer and had chosen this location because they had heard about Kaps' role in 'saving' the last Polaroid factory and wanted to see his personal project in Vienna. This situation repeated itself over the summer, with many groups travelling to Supersense (see chapter 4) in order to have a look at a place that had symbolically acquired meaning (Fraade-Blanar and Glazer 2017, 67). Even so, the performance of everyday fandom was mostly visible in the exchanges that happened on social media. By constantly sharing Polaroid images or other related content, relevant analogue photographic news, and engaging in conversations with other fellow practitioners in social media (through commenting or 'liking'), "communication technologies and media texts contribute to and reflect the increasing entrenchment of a fan consumption in the structure of our everyday life" (J. Gray, Sandvoss, and Harrington 2007, 8).

Within the everyday performance of fandom, however, lies another form of fandom as resistance. In this case, the objects of fandom are seen to deviate from dominant ideologies (Gray et al. 2007, 7), which in the case of Polaroid practitioners has to do with fast-paced consumption and quick technological turnover – something that can be seen in cases of online activism analysed in the previous section, and also in the building of informal infrastructures that secures the continuation of the practice (see chapter 5). One example of this was Steve, who upon seeing that *FP100C* pack film had been recently discontinued told me, "now that all those cameras are going to be made redundant, I really need to figure out how to make this [convert them into 4x5 film format]. There are so many, and they are cheap." More evidently, however, this resistance can be seen in the fight Polaroid practitioners led against the Polaroid Corporation – with Kaps and Bosman chaining themselves to the fence of the Enschede Polaroid factory being the most evident example – in order to continue with their practice.

Accordingly, both the online activist activities (crowdsourcing, *change.org* campaigns, and appealing directly to companies) and the offline ones (converting camera formats to extend the usability of the camera) transform passive consumers into active ones (Minniti 2016, 26), ultimately enabling the continuation of Polaroid practice. Still, while the practices of resistance (seen in crowdsourcing or upcycling) suggest a deviation from planned obsolescence and the rhetoric of 'the new', they don't go as far as rejecting capitalism or the

ideologies that give rise to them in the first place, but proposed more a deliberative democratic process (Gil-Moreno 2016, 204) in consumption patterns.

### **Conclusion: Social Media**

Through the case studies analysed in this chapter, I have argued that media technologies and social media platforms operate as sites where those “who care about the same things” can build communities, rather than as means of disconnecting people or enabling “weak ties”,. This suggests that rather than technologies destroying older forms of communication (Larkin 2008, 6), they have “the potential to shape contexts and social relations in manifold ways” (Spitulnik 2002, 346). Therefore, the committed relationship practitioners establish with their practice and each other (fandom), rather than being something that exists only online, extends into the offline and vice versa (Johnston 2014, 28), shaping their everyday to the extent that it becomes part of their identity. This suggests that, through its material specificity (for example, its ability to produce instant results that can be circulated and gifted) Polaroid manages to produce an affective response that mobilizes more than images, including assemblages of people, objects, and practices (Edwards 2012, 228). Thus, contrary to Bourdieu who argued that “the ‘community’ or ‘group’ always pre-exists the photographic act, whose destiny is to further integrate that group’ (Pinney 2016b, 75) today’s Polaroid practice has created a community. Accordingly, rather than seeking class reaffirmation through photography, the Polaroid community, similar to the one observed by Minniti in Italy, “redefined their identity as members of a distinctive social group: a group of practitioners devoted to use and perpetuate Polaroid technology” (Minniti 2016, 28)

Furthermore, this mobilization of affect – the activism, crowdsourcing campaigns, and material practices that resist obsolescence (tinkering) – could not be conceived without online digital platforms that “function as a nexus of emotion and activities. They are an important core, a center of gravity that both pulls a group together and gives them something shared to bond over” (Fraade-Blanar and Glazer 2017, 33). In this way, engaging in daily communication online – uploading images or Polaroid-related news, ‘liking’ each other’s posts – and banter-like conversations, the communities that fandom create, rather than being related to a technical elite or distinguishing the outsiders from the insiders, as in the case Marvin describes regarding telegraph communities (1989, 18), aims to create internal cohesion in the Polaroid “imagined community” (Anderson 2006).

In *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Benedict Anderson discusses the emergence of nationalism and the role printing capitalism had in

creating a common language. He argued that the printing press enabled an “imagined community” to emerge, where “the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion” (2006, 6). Though criticized for its utopian and homogenizing understanding of communities (Pratt 1991; Postill 2014), Anderson’s concept is useful for understanding the way the Internet “enable geographically dispersed people to overcome time and distance in forging virtual communities of affect” (Marimoto Hitchcock and Chin 2017, 377). Thus, despite not knowing each other offline, through the practice of Polaroid, a feeling of belonging emerges, which confirms the capacity of media to build and sustain a group as a recognized entity (Gómez Cruz & Ardèvol 2013) rather than geographical limitation. In this way, and though I agree with Hitchcock and Chin’s critique of these “imagined communities” being too narrow and not considering other voices or languages (besides English), I still feel the concept illuminates the way the Polaroid community expresses and define itself.

That said, rather than operating as a substitute to offline practices, social media platforms play a fundamental role in the production, consumption and circulation of Polaroid, to the extent that it can be argued that without them, the practice would not exist (see chapter 5). This is not only a personal feeling the members of the community expressed, but one shared by Kaps, who acknowledged that without the Polaroid global community that manifested itself online after the Corporation went bankrupt, The Impossible Project would not have been conceivable. In this scenario, digital technologies, rather than threatening the existence of analogue ones (both in social and material terms) – seen for example in Buse’s observation that “digital did it in” (for Polaroid) (2016, 208) – play a fundamental role in the continuation of the Polaroid practice and the emergence of a new community based on the practice of the media (fig. 17).



*(Fig. 17) Polawalk Collage, 2017*

## CHAPTER TWO: OBJECTS OF THE BODY

### Continuities and Transformations of Polaroid

“Your digital images transformed into real instant photographs. That’s impossible, right? Right! We are Impossible and we love instant photography. We love it so much; we were crazy enough to buy the last Polaroid factory in order to save instant film for the future... But even we instant film aficionados take a lot of pictures with our iPhones, so we wanted to find a way to turn those digital iPhone images into true instant photos.”

Described above is the advertising campaign for the *Instant Lab*, a portable device that through an iPhone designed cradle that sits above a lens enable users to print analogue Polaroid versions of their digital photographs (fig. 18). It was launched as a Kickstarter campaign by the end of 2012 by The Impossible Project. The campaign gathered 2,509 supporters around the world, doubling the requested amount (of money) in only a short period of time. The Instant Lab promised to deliver an analogue outlet for the digital images people took with their iPhones in an attempt to address the hybrid, interlinked space analogue and digital photographic practices inhabit today.

I first became acquainted with the Instant Lab during my five months at The Impossible Project store. Part of my work there involved demonstrating to customers and passers-by the way Polaroid photography worked by taking instant photographs of them and developing them in front of their eyes before giving them away as gifts in tiny, black-branded envelopes. As part of the demonstration, I was also required to show people the Instant Lab and how it enabled mobile digital images – by exposing their phone screen into a darkroom-like device – to be printed out analogously. During the time I was at The Store, the Instant Lab was a complete success; it sold out during the Christmas of 2016.

Even so, despite the excitement the Instant Lab gathered, my first reaction upon seeing the device was of disbelief. How could a device that produced ‘fake’<sup>45</sup> Polaroid pictures be such a successful product? And, how could a device that printed out Polaroids of people’s

<sup>45</sup> I use the word fake to describe what I felt the first time I saw the Instant Lab working, and to capture the fact that I thought it was against Polaroid’s nature. The Instant Lab, on the one hand, enables the printing of multiple copies of a Polaroid image, while, on the other hand, it makes it possible to print out digitally-created images that would be impossible to capture through analogue methods. These two factors were seen by me contrary to the indexicality and instantaneity of Polaroid. Although, later, by talking to my interlocutors, I realised that my assumptions were equivocal, and that the notion of ‘fakeness’ in relation to photography was, to say the least, futile (see chapter 3).

digital photos gather so much interest when digital printers for smartphones had already been available for years? Following my time there, in which people constantly talked about the magical-like character of the device as well as its fun and social potential for holding and circulating images, it became evident that the interest in the Instant Lab raised had to do with the physical character of the photograph, its materiality, and the process by which the image was made. Hence, despite the romantic ideals of aura and originality that I thought were inherent to Polaroid, both The Impossible Project and customers at The Store were already acknowledging the hybrid space of Polaroid photography, a space between the analogue and the digital, and the senseless search for originality in a digitally mediated environment.



(Fig. 18) *The Impossible Project Instant Lab Kickstarter Campaign Screenshot*<sup>46</sup>

The interest in and excitement for the material results of Polaroid photographs, along with the process of making them, was something that extended to that of the Instant Lab and was at the centre of my fieldwork discussions (this issue will be expanded in chapter 3). The excitement the Instant Lab elicited not only challenged my personal view of what the value of Polaroid photography was, that is, its capability to print out unique images, restoring the lost aura caused by mechanical reproduction (Benjamin 2008) but also made me realize that what people sought in Polaroid photography was both materiality, and the mediated relation that produced that materiality, that is, working with the media as opposed to through it. The intention of working with rather than through contradicted the tropes of transparency – the desire for unmediated seamless media (Bolter and Grusin 2000; Patrick Eisenlohr 2009;

<sup>46</sup> <https://www.kickstarter.com/projects/impossible/impossible-instant-lab-turn-iphone-images-into-rea>



Meyer 2011) – imposed by hegemonic discourses that promote the notion that technological progress could be equated with the immateriality and transparency of the media (Negroponte 1995, 14). At the same time it confirmed that mediation was indeed sought after.

For the purpose of demonstrating the fundamental role mediation has taken in Polaroid practice, this chapter focuses on the materials that give life to Polaroid, and how the changes in the chemical and physical composition of the camera and film have altered the way the practice is perceived and experienced today, informing new configurations of an old practice. In addition to materials, and in order to address the concept of mediation, I draw on the notions of transparency (van den Eede 2011; Verbeek 2012) and derealization (Baudrillard 1994), to focus on the way Polaroid appears to challenge them by the bodily involvement its operation requires from practitioners (photo-action).

Finally, by bringing attention to a particular interaction I had during my fieldwork in which one of my interlocutors gave a remarkable account of the distinctions between the taking and the making of the Polaroid photographic image, I argue that when it comes to Polaroid, the attraction of the medium is not so much in the resulting image but in the process through which the image comes into being.

## **I. Materials and Sociality**

Over the past couple of years there has been an ongoing media discussion regarding the continuation, or, as ‘the revival’ of Polaroid photography, seen for example in, *Polaroid is back with a new but retro instant camera* published in *Wired* (Burgess 2017); in *Back to the darkroom: young fans reject digital to revive classic film camera* in *The Guardian* (Stummer 2018), and in *Polaroid Originals: The revival of the classic instant camera* in *Creative Review* (E. Williams 2017). Most significantly, the discussions around this supposed ‘revival’ have been confined to notions of nostalgia and retro cultures (for a thorough account of retro see Reynolds 2011), suggesting that the interest raised by Polaroid is part of an ongoing desire to go back and experience a ‘pre-digital life’ (see chapter 4). However, as my fieldwork suggests the significance of the continuation of Polaroid practice cannot be reduced to nostalgia and retro trends but lies in a complex relationship in which people configure themselves, through their bodies, with the material world. As such, and contrary to what the more prevalent media discourse seems to be, I argue the answer to Polaroid’s persistent use lies in the notion of materiality and mediation, and the way people engage and are transformed through it.

In his introduction to *Materiality*, Daniel Miller argues that in order to approach humanity it is necessary to understand its links to materiality rather than dismissing it as production or fetishism (2005, 2). Instead he proposes materiality as the study of material culture and the way a “specific character of people emerges from their interaction with the material world through practice” (2007, 26), enhancing our capacity as humans (Miller 2010, 59). Wanting to approach a theory of thingness, Miller draws on Hegel’s “theory of objectification”<sup>47</sup> – in which ‘subject-object’ are mutually constitutive – to argue the need to go beyond the subject-object dualism often seen in social sciences. For Miller, while it is possible to transcend the vulgarity of the dualistic apprehension of the world through philosophy, as he notes, “philosophy is useful, but necessarily obfuscating and abstract when brought down as tablets of stone to people whose philosophy emerges essentially as a practice” (Miller 2005, 45). For this, he argues that it is necessary to go back into the mundane understanding of things. For example, in observing the shopping habits of working class people of London, Miller notes how shopping becomes an act through which love is manifested and reproduced. By focusing on the everyday practices, such as shopping for food, he notes how love is objectified through everyday practices (Miller 2008, 264).

A different approach to materiality to that of Miller is the one proposed by Tim Ingold. In *Materials Against Materiality* Ingold argues that by focusing on materiality the field of material culture often disregards the importance of materials. “We see the building and not the plaster of its walls, the words and not the ink with which they were written” (Ingold 2007, 9), he stated about the emphasis material culture has had on consumption as opposed to production, materiality as opposed to materials. However, and in direct answer to Ingold, Christopher Tilley clarifies, “the concept of materiality is all about going beyond the stone itself and situating it in relation to other stones, landscapes, persons and their doings – in other words developing a holistic and conceptual theoretical and interpretative framework” (Tilley 2007, 18).

Following the debate around materiality<sup>48</sup>, in this section rather than focusing on the philosophical question about what materiality really is, instead, I bring to the fore Tilley’s

<sup>47</sup> In *Phenomenology of Spirit* (1807), among other questions, Hegel enquires about the ‘subject-object’ dualism, following the “extreme subjectivism... of the Romantics and the extreme distancing of man from nature, evident in the empiricist tradition” (Miller 1987, 20); concluding that subject-object relationship is mutually constitutive. This conclusion was achieved by him through the concept of *objectification*, “a dual process in which the subject externalizes itself in a creative act of differentiation, and in turn reappropriates this externalization through an act which [he] terms sublation.” (Ibid 28). The reason for considering Hegel’s *objectification* in relation to material culture, as Miller notes, is because it provides the basis for a non-reductionist subject-object relation.

<sup>48</sup> For an extended version of the debate concerning materials and materiality see, *Materials against Materiality* in *Archaeological Dialogues* (Ingold 2007).

attention to the way materials have “profound effects on people’s lives and understanding of the worlds in which they live, and on their actions” (2007, 19), while also bearing in mind Ingold’s attention to materials, that is, “the stuff things are made of” (Ingold 2007, 1). By taking into consideration Ingold’s insistence on materials, I do not intend to strictly adhere to his argument that objects are not preceded by an idea but born along, a claim that disregards the intrinsic qualities of materials (Küchler and Oackley 2014, 82), nor create an opposition between pure materials versus artefacts (Miller 2007), but to draw attention to the “interplay between materials and culture” (Bensaude Vincent 2013, 26; Küchler and Oackley 2014, 84); along with the way materials change both materially and socially.

### **13 Layers of Film Complexity**

Adam affirms that Polaroid’s integral film is the most chemically complex man-made product, with “hundreds of chemical reactions taking place in a choreographed sequence” (2017, 42). Stephen Herchen, the Polaroid Corporation, *The Impossible Project*, and later Polaroid Originals chemist claimed this one night at a talk he gave as part of Wim Wenders’ Polaroid Exhibition at The Photographers Gallery during the winter of 2017. While trying to explain to the audience how Polaroid film worked through some graphics, he admitted: “After 40 years, I still don’t completely understand it.” A claim that was met with affirmative nervous laughs and puzzled looks from the audience.

With this difficulty in mind, in this section, rather than focusing on the how or to pretend to fully understand the way integral film works (see Appendix 2), I will discuss the importance of the chemicals, their availability, and how changes in the materials have ultimately reshaped Polaroid practice.

The chemical formula that has characterized the white-framed Polaroid instant picture (integral film) came into being after a lengthy and expensive process in which Edwin Land and the Polaroid Corporation team worked incessantly for over a decade – with much trial and error – until the ubiquitous film was finally released onto the market in 1972. With a glossy bright colour finish, 13 layers of chemicals waiting to react, and the white frame that has made Polaroid photography universally recognizable, instant photography came to replace the previous Polaroid peel-apart instant film that had been around since the 1960s, addressing Land’s aim to “eliminate the litter of gooey chemical pods and negatives that used to trail the Polaroid photographer” (Life 1972). The new film addressed the environmental concerns caused by people freely disposing of the remains of the picture out in the open,

while also easing the photographic process<sup>49</sup>. The success of integral film (when it was first launched at Macy's, New York, it sold out in a matter of days) meant that the Polaroid Corporation continued to produce it and the cameras that operated with it, with cheaper versions to follow in order to access a bigger share of the photographic market (mainly controlled by Kodak). Some years later, the Corporation released the 600 type film, a similar version to its predecessor but with a higher ASA/ISO, made for the box type camera that turned Polaroid into an icon. During the 80s and the 90s both practitioners and film remained faithful to each other until 2002 and 2004, when Polaroid went through a serious of financial problems that ultimately led the CEO announcing the cessation of film production, an event that triggered the creation of The Impossible Project and many years of film experimentation.

This new phase for the chemical composition of the film, contrary to what most people thought, that is, that The Impossible Project was unable to reproduce Polaroid's integral film due to the formula not being available following the Corporation's shut down, had to do with the fact that though available, the formula was impossible to reproduce due to the chemicals being either banned in the EU or unable to be sourced (Buse 2016, 215). Polaroid's case, unlike with most materials that change their composition due to (social) environmental concerns, conversely, meant that an already successful chemical composition was now seen as an environmental and safety hazard, resulting in the change of the practice. The alteration of the chemical composition of the film meant that the once 'instant' film<sup>50</sup>, with a developing time frame of just a few minutes<sup>51</sup>, turned into a quasi-instant film, with the first Impossible Project beta films batches taking up to 45 minutes to develop: much longer than any Polaroid photograph in the past, and very much against Polaroid Corporations' "pictures in a minute" motto. While discussing the relativity of Polaroid's developing speed, Peter Buse offers the concept of delayed photography (2007, 38). For him, Polaroid's developing speed is "agonizingly slow" when comparing it to digital photography<sup>52</sup>.

<sup>49</sup> This environmental concern was promoted by Claudia Alta 'Lady Bird' Johnson's (First lady from 1963-1969) campaign of beautifying American cities (Adam 2017).

<sup>50</sup> The Polaroid Corporation and Edwin Land didn't refer to Polaroid as instant photography, but as 'one step photography', that one step being pressing the button. However, Polaroid was named as instant by the media and remained like that ever since.

<sup>51</sup> Peter Buse notes that 1947 Polaroid peel-apart film took 60 seconds to develop, whereas the 1960's film took a minute and a half, and the 1970's film 6 minutes to be fully developed (2007, 38).

<sup>52</sup> This issue makes the case of Polaroid even more interesting when realizing that digital photography can actually be considered as instant photography (in terms of image viewing), as opposed to Polaroid which is not strictly instant anymore.

In addition to the changes in the time frame of developing, the new chemical composition of the film also meant an alteration in the film results. The sharp colourful-looking images that took Land research team decades to develop turned into less stable colours and images whose overall result was easily affected by temperature, light, and also, chance. The first beta films released by The Impossible Project in 2010 were highly unstable with some pictures only lasting a couple of days, defying the whole concept of photography<sup>53</sup> as social and memory device, or being plagued by fungus that crystalized the image and turned it into an orange-looking surface. To address this, the first products sold by The Impossible Project came with warnings about the experimental nature of the film (Adam 2017, 16). However, after the first beta film batches and many years of experimentation, The Impossible Project managed to stabilize the formula, releasing more reliable films with a developing time frame of around 5 to 10 minutes (whether black and white or colour), though never comparable to Polaroid's original photographic results (although, as Herchen reminded us, this it is still a work in progress).

### **Chrome and Plastic Cameras**

The materials that make Polaroid practice possible cannot be limited to the chemicals that enable the quasi-instant results of Polaroid photography, but also need consider those linked to the construction of the cameras and what they stand for. When Ed posted on the SCS Facebook group an image of his eight, lined up SX-70s Polaroid cameras (see chapter 1), the camera for which the integral film was originally created in 1972 and arguably the icon of Polaroid photography, he was both emphasizing the number, but also the type of cameras he owned. This camera, as opposed to the ones that were popular during the late 80s and 90s, “as well as containing extraordinary advances in chemistry and optics, was something of a small miracle of design, the way that it folded into a pocket-sized book shape when not in use” (Buse 2007, 40). The design choice of materials, moulded plastic chrome covered in cowhide leather, quickly made the SX-70 a high-end camera, which next to the selling price (\$180), positioned the Corporation as an innovative luxurious photographic brand (Ibid). On the contrary, the cameras that followed (600 and SX-70 Box Type Cameras) during the 80s

<sup>53</sup> In early 2000 the Polaroid Corporation released a film called *Fade to Black* in which the image disappeared after being shot. This was originally created to shoot important documents whose evidence needed to be erased, yet this was intended. Contrary to this, the experimental film batches released by The Impossible Project erased the image unintendedly.

and 90s<sup>54</sup> were made with plastic bodies<sup>55</sup>, fixed focus (or autofocus in some models), and in the case of the 90s ones, often had promotional characteristics and were made out of colourful plastic bodies featuring Tasmania Devil, Spice Girls, and McDonald's. The 90s was an "era [that] saw some of the most collectable Polaroid cameras being produced" (Adam 2017, 59). The changes in the materials out of which the cameras were constructed was not entirely related to manufacturing and selling costs, although this was, in fact, necessary to reach a wider consumer audience, but also with a different type of audience in mind. "In the 1990s Polaroid made the model relevant to a younger audience. A new slogan 'Live for the Moment', appeared..." (Ibid 59), appealing younger practitioners less attracted to the photographic quality of the medium and more into the social aspect of taking photos (Buse 2016, 44). This shift from chrome and leather to plastic signified a double process. On the one hand, the Polaroid Corporation was approaching a new audience, one that was interested in playing and having fun through the use of the camera: on the other hand, it was abandoning reliable practitioners that were initially drawn by the high specifications of the Corporation's photographic products, and were often not willing to accept the plastic materials of the cameras and the cheap connotations that came with them.

"The term plastics," Thompson et al. note, "applies to a wide range of materials that at some stage in manufacture are capable of flow such that they can be extruded, moulded, cast, spun or applied as a coating" (2009, 1973). The first plastic materials, celluloid and Bakelite, emerged at the beginning of the twentieth-century, yet it wasn't until the 1940s when plastic turned into mass-produced everyday items (Ibid), ultimately replacing the Machine Age with the Plastic Age (Bensaude Vincent 2013, 17). By providing a whole new range of household and everyday items, plastic accounted for a role in the shaping of civilization by turning itself into a ubiquitous material, which consequently made it an invisible one (Fisher 2013, 120). From there, the uses of plastic in a whole range of products made goods readily accessible, securing what Meikle identifies as the mobility of the "culture of plasticity" (1995 in Bensaude Vincent 2013, 23). Even so, as Fisher suggests, while plastic, through its lightweight coloured bodies and seamless construction, emphasized modernity, it also emphasized cheapness and imitation qualities; a double-faced character that accounts for the "the capacity of [plastic to] both delight and disgust" (2013, 127). This double

<sup>54</sup> The first 600 box-type camera was released in 1981 (Polaroid One Step 600) and corresponded to a "low-cost 'box-type' model used with integral film. With its flip-open plastic box, single lighten/darken slider and shutter button, the One Step was foolproof" (Adam 2017, 59).

<sup>55</sup> The box-type camera wasn't the first plastic camera produced by the Polaroid Corporation. The Swinger, released in 1965, was also made of a moulded plastic body "and aimed at the youth market" (Adam 2017, 25). However, these weren't as ubiquitous as the plastic cameras that followed during the 80s and 90s.

capacity of plastic suggests its plasticity, a plasticity that is both related to the material specificities of plastic, its smoothness when new and its degrading character when old, but also with how a materials' perception can be socially altered (Küchler and Oackley 2014, 82).

The way the perception of materials is altered in society explains why Polaroid plastic cameras that were once rejected and dismissed as toys by an older audience, have today become the desired media for many practitioners. Despite most of my interlocutors owning SX-70 or SLR680 models and having them as their go-to camera due to the sharpness of the image produced, this was not a rule. Besides owning highly professional cameras, like the modified Polaroid SLR670<sup>56</sup>, they also carried with them low-spec plastic cameras. This was the case for Ed, who, despite owning a vast collection of SX-70s, was always sure to carry a cheap plastic one. I witnessed this myself during the different photo walks, in which Carlos would be carrying a cheap camera, such as disposable 35 mm, and sometimes a 2 megapixel Gameboy camera, despite owning a SLR680, one of Polaroid most well-accomplished cameras due to its material construction and photographic specifications<sup>57</sup>. Similarly, the first time Lisa joined us for a photo walk she was carrying a Polaroid Box Type SX-70 camera, originally released in 1976, and one of first cheap, mass-produced cameras made to increase film sales (Adam 2017, 46).

The camera choices of my interlocutors indicate a twofold response to the social plasticity of materials. First, they indicate a shift in practitioners' perceptions of the materials of the camera and the qualities within it, adhering to the idea of plasticity. Second, they indicate a shift from a high-quality image to images that are not aimed to produce 'the best' results. This last response suggests that the aim behind using a Polaroid camera is not related to the quality of the image but to an aesthetic approach to photography in which 'errors' and low-quality results are integrated as part of the practice (see chapters 3 and 4) (fig. 19). Consequently, the social plasticity of most materials indicate their ability to "elicit feelings that influence the actions we take with them" (Fisher 2013, 107), at the same time this evidences that it is not only the materials that have changed the practice, but the practice that has also changed the conception (and preference) of materials.

<sup>56</sup> The SLR670 is a modified SX-70 Polaroid camera sold by the Hong-Kong based company, Mint. The SX-70s body is modified to include a 'time machine', an electronic device that allows users to manually adjust the shutter speed. The price of an SLR670 is \$779.

<sup>57</sup> The Polaroid 680 camera comprises both the technical capacities of the SX-70 (foldable, glass lens, manual focus, light adjustment) with an integrated autofocus and flash that can be deactivated. This has made the camera one of the most sought after as it provides the stability and quality of the SX-70 with the automatic options of later cameras.



*(Fig. 19) Resignification of 'Errors' Facebook Screenshot Examples*

## The New Old

"I won't use Polaroid again unless the film works as well as the original one, so let me know when it does." Sadie, a photographer who worked with Polaroid during the 80s and 90s told me one day at The Impossible Project store. According to her, the current Polaroid film wasn't 'good enough' to work with, and nothing compared to the previous one. Despite her reluctance to use Polaroid, which was also echoed by others (mostly online), most people I met during my fieldwork embraced the practice despite its material alterations, often considering the unexpected results caused by the new chemistry as an added quality rather than a problem. In their eyes, the new chemical composition rather than alienating them from the practice enabled creative outcomes that have now become a fundamental part of it.



The tension between Polaroid's original 'old' practice – “easier and faster kind of photography... of evident high quality, the best that modern man and machine could engineer... Polaroid came to stand in collective consciousness for quality, speed, ease, and even, one might say subliminally, democracy” (Ewing 2017, 19) – and the 'new' one suggests that Polaroid has become a new practice rather than being the continuation of a practice that has been going for several decades (as Sadie appeared to believe, and wish). As a result, due to the alterations of its chemical composition and materials, today Polaroid is a new practice based on the old one. These transformations confirm that Polaroid's current practice can be considered both a continuation and a transformation of the previous one (Lister 1997:270). This process of continuation that encompasses the interruption of traditional practices was addressed by Ralph T. Coe while working with Indian communities and their art practices (1988). According to Coe, tradition proves its convoluted nature through the art-makers' willingness to incorporate new influences into their production (both new material and new topics). This willingness, in turn, challenges the conception of tradition as untouchable, and suggest that in traditional practices materials are processual and in flux (Ingold 2007, 14; Tilley 2007, 17). By taking the notion of continuation, Polaroid today, similarly expresses both the continuity of an old practice and a renewal of it through modern technology.

Comparing the digital image to the chemical one, Michelle Henning argues that rather than experiencing photographic media as the new against the grain of the old, people “experience new media and technologies in old and familiar contexts and not necessarily in a 'pure' form” (1995, 221). Correspondingly, the changes in the materials and chemical composition of the film that took place after the creation of *The Impossible Project* didn't just alter the perception of Polaroid photography (through the changes in the developing time frame and the resulting image), but the way in which Polaroid is practised and experienced, ultimately creating a new practice based on the old one, i.e., a new old<sup>58</sup> practice (Ibid 223).

With this concept of the new old in mind, the 'old' tradition of Polaroid picture taking – one-step innovative photography – meets new, modern materialities – chemicals, digital, manufacturing, skills – creates a practice that might appear to be a continuation, a repetition (Henning 1995, 223), but through its developing times and the instability of the photographic image, reveals a transformation, that is, a discontinuity or reworking. The

<sup>58</sup> Michelle Henning uses the concept of the new old while discussing 'revivalism'. According to her, revivalism's positive potential comes when the new is not a repetition of the old, but a reworking of it (1995, 223). However, here I use this concept to define Polaroid's current practice, the intertwining of old and new materials. Alternatively, Sergio Minniti uses the concept of Polaroid 2.0 to refer to the contemporary use of instant photography in which “old and new elements are integrated into renewed configurations” (2016, 40).

capability of current Polaroid practice to work both as a continuity and discontinuity (tradition and innovation) serves as a reminder that modernity does not cancel tradition (Coe 1988, 39). At the same time it proves that traditional ‘old’ practices are not static, but dynamic. Accordingly, both Henning and Coe remind us that the new cannot be read against the old, but rather that newness and oldness are bound together (Henning 1995, 221) and that “advances are prefigured in old techniques” (Benjamin 1999, 517).

## II. Body and mediation

One of my first Polaroid cameras was a Polaroid 180 which uses peel-apart film. It was given to me as a gift by my friend Steve whom I met during previous research on Polaroid and the social media communities (2015). The day that I was introduced to the camera Steve and I were sitting in a coffee shop in Central London when suddenly he took a big grey box out of his backpack. Upon enquiring what the box was, Steve proceeded to open it for me, carefully opening up the rigid plastic cover, the magnetic framing piece, and the expandable bellows. Never having seen one before, I thought I was looking something from another era (which in a way, it was). It just seemed so complex to operate. That day my friend Steve showed me how it worked. Once the camera was fully opened, three main steps needed to be followed. Marked with numbers, 1, 2, 3, the camera operator needs to follow a certain order to get the film and camera ready before shooting (fig. 20). This order also implies that the hands need to be positioned correctly to allow both thumbs to operate in synchrony to facilitate the focusing of the camera. When a picture is finally taken, a tab needs to be carefully pulled out of the side of the camera, making sure not to rip it. After a few minutes, the picture needs to be peeled back and left to air dry to reveal a positive and negative image: a beautiful picture that has to be opened like a gift.





*(Fig. 20) Different Stages of Unfolding a Polaroid Land Camera*

The description of my first encounter and operation of a Polaroid 180 Land camera depicts one of the ways in which media, through the process of mediation – the opening, securing, framing through the viewfinder, and adjusting the light exposure to finally shoot the image, pull it out, and wait for it to develop – imposes new relations for the body, perception, time, and space (Benjamin 1999, 512; Ginsburg, Abu-Lughod, and Larkin 2002, 19). Peter-Paul Verbeek explains mediation as the way “technologies organize new relations between human beings and reality” (2012, 392). Discussing mediation theory, that is, a specific approach within the field of philosophy of technology that focuses on specific technologies as opposed to broad cultural assumptions (Ibid 391), Verbeek challenges the assumption that technology as an ‘in-between’ entity which can either be transparent, opaque or both<sup>59</sup> (van den Eede 2011), and proposes a theoretical approach in which technologies rather than being ‘in-between’ are “constituted in their mediated relationship” (Verbeek 2012, 392). He later adds that, “human beings and their world are products of mediation, not its starting point” (Verbeek 2012, 393, 2015), turning them “a constitutive process in social life” (Mazzarella 2004, 345).

Bruno Latour’s concept of “black boxing” speaks to the difficulty of measuring the mediating role of technologies (1994, 36). According to Latour, the relationship between the actant and artefact is ‘opaque’ because only the input and output can be witnessed, while the process remains concealed. This means that when operating a certain technology, a photographic digital camera, for example, it is not possible to see what is happening inside the camera, but only the resultant image (for which Latour proposes ‘opening the black box’). Even so, the relationship between the subject and the object can also be described as

<sup>59</sup> According to Yoni van den Eede, technologies can be opaque, when they obstruct or block the perception of certain things; transparent when one sees through them; or these two characteristics can be interrelated (2011, 141).

transparent when the artefact in use is naturalized to a degree that it is not visible anymore unless it is broken. This double capacity of technology of being both opaque and transparent, of disappearing and appearing into the background, is based on the *theory of transparency* (van den Eede 2011, Verbeek 2012), an almost paradoxical notion (as it will be further seen) that explores how “the audiences often feel more connected to an event when it is mediated, but that successful mediation requires the simultaneous erasure of the signs of mediation” (Blackman 2016, 38).

According to Miller, “objects are important not because they are evident and physically constrain or enable, but often precisely because we do not ‘see’ them”, their “somewhat unexpected capacity of objects to fade out of focus and remain peripheral to our vision and yet determinant of our behaviour and identity” (2005, 5). This transparent character of the object, what Miller defines as the “humility of objects”, indicates the paradox of materiality and mediation (Meyer 2011, 25), i.e., where the more important the object is to us, the more invisible it becomes. However, the case of Polaroid, contrary to Miller, suggests that a fundamental aspect of the practice is the active and visible mediation the camera imposes on the body.

### **Making Photography**

Kelly is a photographic artist working with Polaroid, as well as other analogue and digital photographic technologies, who runs an ‘alternative’ (to digital, though still supported by it) photographic methods group in London. According to Kelly, what makes Polaroid interesting for her and for others is that,

“They [people] can make a photograph rather than [just] take it. There is an element of hand-making, of engineering, making your own camera. You can really get involved in creating something that no one else has created before.”

Kelly’s account suggests that the defining characteristic between the *taking* and *making* of an image can be seen in the multiple steps that Polaroid (and other ‘alternative’ processes) demand while being operated. For her, the making demands a corporal and sensuous involvement with the technology that digital photography, which is equated with the taking, does not impose. Kelly’s distinction between the making and the taking, indicates a fascination for working with media rather than through it, turning the camera into a mediator

rather than an intermediary (Verbeek 2012, 392), rendering it visible as opposed to transparent (or humble, following Miller's nomenclature).

However, that the higher degree of mediation Kelly perceives in the process of operating a Polaroid camera (compared to a digital camera) is only apparent. Technology's capability to 'recede into the background' (Latour 1994, 36) is not related to the media's materiality but rather the way technology has been discursively framed through the concept of *transparency*. Van den Eede (2011, 142) and Verbeek (2012, 394) both trace the notion of transparency back to Heidegger's analysis of the hammer, where "the less we just stare at the hammer-thing, and the more we seize hold of it and use it, the more primordial the relationship becomes" (1962, 98). According to Bolter and Grusin, however, 'immediacy' (transparency) can be traced back to the Renaissance where 'seeing through' the media was enabled by the development of linear perspective (2000, 24). In the context of digital technologies, Bolter and Grusin describe this transparency as the "double logic of mediation", in which the more the media multiplies the more it tries to erase all the traces of its mediation (Ibid 5). Moreover, William Mazzarella, expanding the argument, suggests that transparency is linked to political and social expectations of efficacy and democracy in what he defines as the "politics of immediation".

"The benefits of the media are loudly foregrounded in mainstream debates— 'let's wire the world!'—[however] mediation itself is frequently denied. This denial occurs because the idea of mediation implies distance, intervention, and displacement. It thus undercuts the romance of authentic, intuitive identification, which, in turn, is the ideological guarantee that both capitalism and politics are driven by the interests of the consumer-citizen, not the corporation-party" (Mazzarella 2004, 348).

Mazzarella's comment on the contemporary desire to both wire the world, yet also render these wires invisible, corresponds with what Birgit Meyer defines in the context of religious practices as the paradox of mediation, where media disappears rendering people's relation to religion immediate<sup>60</sup>, and consequently more powerful (Eisenlohr 2009; Meyer 2011). In relation to photography – considered as "the perfect Albertian window" due to its automated linear perspective that conceals both process and artist, and which digital photography only exacerbates through algorithms (Bolter and Grusin 2000, 25) – Kelly's distinction between

<sup>60</sup> Immediate: an absence of mediation (Sterne 2003, 100).

the taking and the making expresses that rather than ‘seeing through’ the media, she seeks to undergo the rich sensorium of human experience (Bolter and Grusin 2000, 34).

Even so, and despite digital technologies being rendered transparent, this transparency “is always chimerical” (Gitelman 2006, 7) and the “desire for more immediate relationships with the spiritual, or political and moral values and goods become especially acute when the established forms of connecting to them are in crisis” (Meyer 2011, 17). In the case of Polaroid practice, Meyer’s argument of immediacy in the face of crisis indicates a perceived disconnection with ‘the real’ in digital photography, which in the eyes of practitioners can be contested through the use of Polaroid. (More attention to the relationship between Polaroid as a contestation to digital will be analysed in Chapter 3, and 4).

### **Battling the ‘Unreal’**

The ‘loss of real’, that is, the derealization and dematerialization of the image was an issue that I encountered repeatedly during my fieldwork while discussing Polaroid practice in relation to digital ones. This was often communicated through phrases such as Polaroid being “more real,” “you can touch it/smell it/feel it,” as opposed to digital which was considered to be “less material” or simply, “unreal”. This issue was unpacked by Florian Kaps during a long conversation that took place during my stay at Supersense. Under the leaves of a traditional Viennese *biergarten* Kap’s told me about his appreciation of today’s Polaroid practice, his role in ‘saving’ the last factory, and what he foresaw for its future. When I asked him why he felt Polaroid was gathering such an interest today, after thinking for a few seconds he told me,

“It seems to be very confusing, but at the end of the day, I think it’s super, super easy. It’s because digital is always behind glass, it doesn’t produce any real things, and people love things they can touch, smell. They love to taste the food and sit here and have a beer, and discuss.”

The emphasis Kaps placed on ‘the reality’ of Polaroid as opposed to the ‘untouchable’ digital (always behind glass), similar to that of my interlocutors, suggests there is an interesting complexity related to the photographic image in which “the more humanity reaches towards the conceptualization of the immaterial, the more important the specific form of its materialization” (Miller 2005, 28). Even so, “the trope of immateriality”, as Blanchette noted, “is not a new phenomenon by any measure” (2011, 1043). For Blanchette, the telegraph was

already received with the promise of metaphysical communication. With the advent of digital communication, this situation has only been exacerbated due to messianic tropes that constantly reinstate that “the internet, cyberspace, the fluidity of markets, and the digitization of most realms of human activity from architecture, to manufacturing, to imaging and telecommuting all suggest that our activities are becoming less and less material and increasingly immaterial” (Buchli 2015, 1). That is to say, the liberation of information from matter (Blanchette 2011, 1043). However, immateriality is only an illusion, and “bits are necessarily both logical and material entities” (Ibid 1042), as can be witnessed in the material and physical infrastructure that digital communication needs to operate, which is no less material than the analogue ones.

Still, my interlocutors’ perception of the ‘unreal’ character of digital, versus the ‘real’ character of Polaroid cannot be reduced only to the notion of immateriality and needs to be explored in relation to the derealization crisis, brought about by the loss of aura and hyperreality. In his acclaimed essay *The Work of Art in the Age of Mechanical Reproduction* (2008), Walter Benjamin referred to the relationship between art and technology in which the language of photography and film’s revolutionary potential was related, among other things, to the withering of the aura, i.e., the authentic, original character of the work of art (2008, 221). This “shattering of tradition”, in which “mechanical reproduction emancipates the work of art from its parasitical dependence on ritual” (Ibid, 224), meant the impossibility of distinguishing copies from originals, which for Benjamin signified that photography represented a social utopia by democratizing the image and bringing every image to mass audiences (Buck-Morss 1991, 131), but it also threatened certainties (Henning 1995, 219).

Michelle Henning argues that the “hyperreal” – that which “threatens the difference between the ‘true’ and the ‘false’, the ‘real’ and the ‘imaginary’” (Baudrillard 1994, 3) – in photography refers to the inability of people to distinguish the real from the simulation of the real, an idea itself based on an assumption that images are documents of reality (Henning 1995, 219). This inability to distinguish the originals from the copies, brought about by mechanical reproduction, means “the chemical photograph’s most powerful claim to truth rests at its foundation in an encounter with the physical world” (Henning 2013, 217; 2018, 9), that is, its indexical trace or *exuviae* (Gell 1998, 104), collapses and falls into an apparent derealization, only exacerbated by the digital. Thus, the perception of the once real material photograph, ‘the having-been-there’ (Barthes in Henning 2013, 217), becomes anchored in notions of simulation and simulacrum (Baudrillard 1994), rendering digital photography ‘apparently’ unreal and immaterial (for an extended account on photography’s ‘claim of

truth' and the concept of indexicality, see chapter 3). However, derealization, as much as dematerialization, despite appearing as truth in the eyes of Polaroid practitioners, needs to be understood only as an example of how a "reconfiguration of the relationship between materiality and culture leads to a renewed role played by material objects in people's life and activities" (Magaudda 2011, 16).

The case of Polaroid, then, presents fascinating complexity. Due to its material and chemical composition, and as opposed to other forms of photography which enable multiple copies to be made, Polaroid, has no negative, only a positive. This means that every image taken with a Polaroid camera is arguably, an 'original'<sup>61</sup>. Still, despite Polaroid's original value (in an era in which the originality of the image is non-existent) and some of my interlocutors suggesting originality as one of the reasons they used Polaroid, my impression is that while the term originality is present in their discourse, it seems to be standing for something else. This would explain the puzzling behaviour many practitioners exhibit with regards to Polaroid images: scanning and uploading them to several online platforms expressing a disinterest for maintaining the 'purity' of the unique image, and their vacillation towards other formats of instant film that are also unique, as the next section will demonstrate.

### **III. The Becoming of the Image**

On one of the occasions that I met with Ralph, and while discussing people's use of Polaroid or other analogue technologies in today's digitally mediated environment. Ralph told me,

"Everybody thinks that it is a yearning, that it is nostalgia, but it is not that, let's face it, there are certain things that you don't do that you used to do, maybe it is nostalgia...anyway, you used to turn the back of the record to look at the album artwork, these days you just download anything. But who listens to albums anymore? How do you listen to an album? Now they just listen to individual songs. People actually want to listen to an album. Now, there is this thing about really casual easiness, just being able to skip a track or being able to take 20 pictures."

Ralph's account regarding the preference of Polaroid indicates one of the main misconceptions analogue technologies generate. The framing of analogue's current use in

<sup>61</sup> The originality of Polaroid, rather than being a positive aspect, for Land it represented an issue that he was able to solve some years later with the Type 55 film, created mostly for artists as it allowed a negative to be made. Additionally, Polaroid offered a copy service in which Polaroid images were photographed with a Polaroid camera, enabling the picture to be copied.



terms of nostalgia (see chapter 4) and in the context of a rejection of digital technologies, disregards the complexity that these practices require and the infrastructures that need to be in place for them to function, and the integration of both technologies. Accordingly, through Ralph's account it becomes evident that his preference for Polaroid is not connected to the aesthetics of retro-looking images, or rejecting digital technologies (like his use of iPhone or other digital cameras suggests), but to a desire to experience mediation through the handling of the medium, which can be seen in his emphasis on the holding, looking, and hearing of the album. For him, the practice of hearing a vinyl record is not related to sound quality, as it is often claimed (Bartmanski and Woodward 2015), but with the corporeal relationship the medium demands from him. This insistence on the body through the use of analogue technologies can be seen in a puzzling case Florian Kaps mentioned during one of our meetings.

“I only recently learned that more than 50% of the people who buy records in the UK don't have a turntable. What they do is that they listen to the downloaded [record] and hold the album and read the text on the vinyl sleeve. So it is more about having the thing in your hands...”

Although Kaps' example might seem farfetched, the BBC News published a short documentary piece called *Silent Vinyl: Buying Records Without a Record Player* (BBC News 2016), focusing on people who purchased vinyl records despite not owning a record player with the exclusively intend of holding it. This oxymoronic example, as the silent-vinyl title suggests, confirms that there is an undeniable social and cultural conviction about holding and touching as being part of the experience, and which drives people to acquire vinyl records. The use (and arguably value) of Polaroid technology, then, as much as the case with vinyl records, appears to be in the corporeal disposition the medium demands and enables – what Buse terms as ritual actions (2016, 219) – which rematerializes the digital object, as well as the indexical value people ascribe to analogue media (see chapter 3).

### **Photo Action**

With Ralph's account in mind, along with Kelly's distinction between the taking and the making, and Kaps' appreciation of the digital image's immateriality being due to only existing behind a glass screen, it is arguable that the material specificity of Polaroid is at the very core of people's interest in the technology (as opposed to producing retro-looking images or an

anti-digital sentiment). The capability of a Polaroid photograph to act simultaneously as a visual and material experience can be explained through the notions of the “photo-object” (Edwards and Hart 2004) and “photo-materialism” (Buse 2016).

“Photo-materialism seeks to render corporeal and singular the photographic in an epoch when its material supports are increasingly screens rather than photographic paper and its singularity doubtful when it can be transmitted as a code to any computer or network” (Buse 2016, 107).

Photo-materialism is seen in the opposition made by Kelly between the taking and the making of an image and, furthermore, in the sensorial dispositions that the materialization of the image, through the involvement of the body (through touching, smelling, holding) brings into the aesthetic experience. Kelly’s insistence on the sensorial disputes the Kantian decorporalized aestheticism, that is, the “‘aesthetic’ judgement robbed of its senses”, and the aesthetic experience happens through a process of the mind, where ultimately, “the transcendental subject purges himself of the senses which endanger autonomy” (Buck-Morss 1992, 9). This decorporalized aestheticism – what Buck-Morss termed anaesthetics (1992; Pinney 2005) – and which according to my interlocutors operates in the digital image, is challenged by the corporeal involvement in the making of the Polaroid image. Thus, instead of decorporalized digital photography, Polaroid suggests corpothetics, that is, sensory corporeal aesthetic disposition towards the image (Pinney 2002, 359; Ginsburg et al. 2002; Buse 2016). This shift from anaesthetics to corpothetics, in turn, confirms a shift in the ‘function’ of the photographic image, which, rather than being located in the social artefact or the purely representational, can be found in the material capability of Polaroid to reinstate the body (and senses) into the photographic practice once again.

A similar argument to that I am making about Polaroid can be seen in Hans-Joachim Braun’s analysis on the revival of the Theremin over the past few decades. According to Braun, the revival of the first electronic instrument is connected to the particular performative and corporeal character of the Theremin and the way it “reacts to every movement in its immediate surroundings, players not only have to stand completely still but also have to refrain from nervous breathing or any other signs of stage fright” (2009, 141). For Braun, the performative element of the instrument has helped “remystify the western world” (Ibid 147) following the demystification or disenchantment brought about by modernity and the rationalization of time and space (Jenkins 2000, 29). This rationalization, which according to sociologist Max Weber corresponded to one of the results of modernity

and the scientific method (1971), was at the heart of modernity and meant that everything was potentially understandable and tameable (Jenkins 2000, 12). However, as Jenkins argues, Weber's disenchantment was based on a notion of universalism which is why he proposes that disenchantment can be re-enchanting, but more importantly, that enchantment, disenchantment, and re-enchantment are all part of modernity (2000, 29). Hence, similar to the demanding sensory-corporeal involvement the Theremin requires, Polaroid reveals that, "taking a Polaroid is an event into itself, contained within the party atmosphere [...] the picture does not commemorate the past party, but it participates in the party as it occurs" (Trotman 2002 in Buse 2016, 108), extending Polaroid practice from photo-object or photo-materialism, into photo-action (Buse 2016, 109).

The accounts given by my interlocutors show that the practice of Polaroid has more to do with being mediated by the media while operating it rather than working through it as if it were transparent, which confirms photo-action and debunks what Morris termed as the "dream of mass mediation in the age of electronification", that of pure transmission without a medium (2002, 383). Even so, although analogue might give the impression of being more 'material' or 'real', and consequently, corporalized than the digital,

"The material realm has not been supplanted, the virtual realm works alongside in a hybrid fashion to facilitate connections, views and realms as most innovations in the past have done. Its 'artefactuality' is just as effective as it was early on: the Internet as much as the constituted and 'conserved' artefact, or nineteenth century engraving are different constitutive representations" (Buchli 2002, 18).

Buchli's account of the material (artefactual) character of digital demonstrates that dematerialization, just as immediation, is only perceptual<sup>62</sup>, and arguably only possible due to the constant discursive opposition between digital and analogue media. This, however, is not something new nor exclusive to Polaroid technology.

When the SX-70 was first advertised (1972), Polaroid Corporation's campaign depicted the camera as a seamless and unmediated photographic medium (in opposition to 35 mm photography). Similarly, following its release in the 1920s the Theremin was originally intended to free music of the constraints of the human hand (Braun 2009, 142). What these

<sup>62</sup> As Bartmanski and Woodward suggest, the processes of dematerialization due to digitization "do not mean less materiality and do not imply a less relevant social role for the material objects within consumption processes" (2015, 4). Thus, analogue media handling gives the *impression* of a more mediated and materialized relationship with the media, though it is only perceptual, as the digital is no less material or mediated, but has been made to appear this way (see chapter 3).

two examples suggest is that it is only due to digital photography (or music) embeddedness in tropes of immediacy and immateriality that Polaroid can be considered mediated and material today. This, once again, reveals the interplay between materials and culture (Bensaude Vincent 2013, 26) and how they affect the perception of media technologies. Even so, as will be discussed in the next chapter, the defining of Polaroid photography by opposing it to digital doesn't imply the erasure of one media form over the other, but a complex logic of supplementarity in which "the opposites merge in a constant undecidable exchange of attributes" (Norris 1987, 35).

### **Aura of the Processual**

The analysis of Polaroid practice so far has centred on the corporeal and sensorial aspects of the technology, and how, for practitioners, it stands as an alternative to what they consider to be digital 'immateriality'. Following this, in this last section, I would like to draw on Kelly's example once again to extend the corporeal orientation of Polaroid towards a discussion of the processual. By focusing on the process of the making of the image, as opposed to the content of it, I propose that in Polaroid practice the process of making an image is linked to an attempt to re-enchant (Jenkins 2000) through the embodied capacity of the medium.

Observing the relationship between art and the technical processes through which art is made, Alfred Gell argued that,

"The peculiar power of works of art does not reside in the objects *as such*, and it is the objects as such which are bought and sold. Their power resides in the *symbolic* processes they provoke in the beholder, and these have *sui generis* characteristics which are independent of the objects themselves and the fact that they are owned and exchanged" (1992, 48)

To later add,

"It is the way an art object is construed as having come into the world which is the source of the power such objects have over us—their becoming rather than their being" (Ibid 66).

The emphasis Gell placed on the importance of the becoming of the art object (the process by which it is 'humanly' made), as opposed to the object itself, is beneficial while thinking about Kelly's distinction between the making and the taking. Kelly's preference of Polaroid

over other photographic media lies in its mediating capability, in which the power of the photographic object emerges in the process by which the image becomes. However, contrary to Gell who considered the art object to be an extension of its user's (or maker's) agency (Layton 2003, 451), Kelly locates agency of the making of the image in the hybrid camera person/camera (Pinney 2010, 166) and its capacity to affect social and material configurations, and in this particular case, to restore the lost aura (of the image) by the process of the making of that image. This attention to the processual is particularly clear in the case of the Instant Lab introduced at the beginning of this chapter. The resultant Polaroid images, created through the conversion of a digital image into an analogue ones by 'exposing' it into the dark-room-like device, suggests that its value is in the processual capacity of the Instant Lab to make the image (as opposed to take it).

Furthermore, the Polaroid camera's capacity to alter the perception of mediation, making the "humble object" (Miller 2005, 5) become visible, echoes Walter Benjamin's observations regarding the effects of technology in altering the perception of social life (2008). Often criticized as 'technological determinism', Benjamin's argument noted the repercussions both photography and film had for social life, mainly the shattering of tradition in the form of aura.

With this argument in mind, it is possible to argue that Polaroid, "has the potential to disrupt but also reaffirm aura" (Henning 1995, 233), through the process of making an image, rather than the image itself. This suggests that the digital discourses proposed by the likes of Negroponte can be disrupted and challenged by the corporeal involvement practitioners seek through Polaroid technology.

### **Conclusion: Polaroid's Plasticity**

This chapter began with an account of the Instant Lab, a device that enables digital images to be printed analogously on Polaroid format. The reason this digital-to-analogue printing device gathered so much attention suggests that, despite my assumptions, the 'value' of Polaroid rather than being in the original (authentic) quality of the image or in its retro-looking aesthetics, lies in the possibility to engage in a corporalized (photo-action) relationship with the medium, that is, to experience the process through which the image becomes. This realization challenges digital discourses of transparency and immediacy, indicating instead that the insistence on Polaroid's (and other analogue media, like vinyl records) mediating capacity exposes "opposite manifestations of the same desire, the desire to get past the limits of representation and to achieve the real" (Bolter and Grusin 2000, 53).

Hence, despite Edwin Land considering Polaroid photography as “no sense of anything between the photographer and subject... one should see one’s subject as if just gazing at it, seamlessly. One should not have the experience of looking through a machine” (Bonanos 2012, 93), the present chapter suggests that the perception of Polaroid has been radically altered from what Land envisioned. The demise of the Polaroid Corporation and the subsequent creation of The Impossible Project not only meant a transformation in the infrastructure of the company, but also in the chemical and material composition of the film which transformed the perception and experience of the current practice, creating a new practice based on an old one, a new old. This new old character of Polaroid practice, thus, informs the complex space Polaroid inhabits in a digitally mediated environment, and demonstrates how despite constantly being defined in opposition, when it comes to analogue and digital technologies (and tradition and innovation), “it is not a case of ‘either or’ but of ‘and, and’ (Latour and Lowe 2010, 4).

## CHAPTER THREE: OBJECTS OF BECOMING

### Digital to analogue outputs

My arrival at Supersense, Florian Kaps' 'all-analogue' concept store located in Vienna, was on a sunny Monday morning. That day, like all Mondays, the place was closed to the public, yet all of their machines were running. You could hear the metallic noises of the Korrex printing press Maya was operating, along with vinyl records playing, and the steam of the Italian coffee machine invading the room, while people 'caught up' and worked on current projects: the folding of vinyl record sleeves, the arranging of the printing matrix, and the preparation of the 8x10 photographic studio for a portrait appointment. Supersense was founded by Florian Kaps, Andreas Holler, and Nina Ugrinovich after Kaps left The Impossible Project. Kaps decision to create a space in which all-analogue technologies converged emerged from what he felt was a shared commonality among these technologies. He described this to me in the following way:

“During my time at Impossible [Project], I found out... I rediscovered the analogue aspects that were not just restricted to Polaroid, but it's basically in many other aspects. And everybody who loves Polaroid loves letterpress, loves vinyl records, so I said, ok, I have to learn more about these other technologies because they are also in danger. As the crazy guy who saved the last factory, I met other crazy guys who save the last cutting machines [Master Records] and the letter pressing technologies, so I said, ok, let's make a place where we can bring all of these together. And originally this was my dream for an Impossible store, I thought, ok, let's make an Impossible store not only with cameras but inviting other people. They are the same customers.”

From the description Kaps gave me, it is apparent that Supersense rather than focusing solely on Polaroid comprises a wide range of analogue media technologies and practices – letter pressing, master record cutting, live recording sessions, along with museum-like displays, and a coffee shop that invites customers to experience locally-sourced produce – which according to Francis, who gave me my tour on the first day, are intended to stimulate the five senses.

While wandering around the place, including the basement where the original Polaroid chemical pods were stored, one of the main things that caught my attention was the constant rhetoric about 'making things real'. Through different signs placed around the space, visitors

were encouraged to “make their photos real” by bringing their digital images on their phones and converting them into classic white-framed Polaroid pictures (integral film), 8x10 or 20x24 format. These services were not restricted to images. Digital-to-analogue conversions were also offered for other photographic formats, like the transformation of digital images into wet collodion plates, a “technique dat[ing] from 1851 and is photography in its purest form. Transform your photo into a unique image, formed by a wispy layer of silver on a fragile sheet of glass, made with love by wet-plate alchemist Zoltán Janota (fig. 21).” While it also offered the possibility to “bring or upload your digital sound file and we carefully hand cut it into an outstanding Master Record in real time.” Furthermore, these services expanded the geographical limits of the place, with all of them being offered online at supersense.com.

“This is not a traditional print-service but an all analog chemical adventure! By turning pixels into real color molecules, we carefully convert your photo into an original Polaroid picture. With highly complex chemical reactions adding unpredictable characteristics, your photo becomes a true analog original of no other kind.”



*(Fig. 21) Wet Collodion Plates Examples at Supersense*



After being introduced to the different services and products they offered, one of my first tasks was processing 8x10 Polaroid pictures by using a one-of-a-kind custom made Instant Lab (see chapter 2) (fig. 22) which printed out analogue version of digital files in an 8x10 format. The image that I was instructed to convert (or ‘process’ as it was referred at Supersense) was a black and white portrait of a famous jazz singer (made to accompany the recently recorded master record). After Francis explained the process of this conversion – selecting the image on the iPad, placing the iPad in the custom-designed cradle (where the lens normally goes), assembling the processor, fitting the undeveloped film in the ‘cassette’ (film holder), placing the holder in the Instant Lab, and finally lifting the layer covering the film and pressing the shutter to expose it while counting to ten – I started to work on the images. At the end of that day, I ended up converting multiple analogue versions of the same digital image, though none of them turned out to be exactly the same due to the chemical inconsistencies and unpredictabilities of the film<sup>63</sup>. Each of them was a unique copy of the digital file<sup>64</sup>.



(Fig. 22) 8x10 Polaroid Processor, Supersense

<sup>63</sup> Although the film made by the Polaroid Corporation was highly stable and produced high quality results, the use of expired chemicals (leftover from the Corporation) or new film has meant that current results are unpredictable.

<sup>64</sup> Due to the nature of the material and chemical composition of the Polaroid film, there is no negative of the photographs, only positives. This means that, technically, Polaroid images are irreproducible, though a picture of a picture can be taken or, through the use of the Instant Lab, analogue copies of digital images can be printed, though because of the unstable character of the chemicals it is impossible to get two images that look exactly the same. In the case of 8x10 and 20x24 images this is exacerbated by the age of the processors and chemicals (many times expired), which means that although digital to analogue conversions are made based on the same image, the result is never an exact reproduction.

Another of the digital-to-analogue services that Supersense offered, arguably its most impressive because of the unique nature of the medium, was the conversion of digital photographs into 20x24 instant analogue ones. The camera that produces 20x24 Polaroid photographs (fig. 23) was built in the 1970s by the Polaroid Corporation (following Edwin Land's request) in order to take the portrait of their research director. It was later replicated in preparation for a shareholders meeting (Adam 2017, 41), but only five were produced, making it extremely rare. The most well-known camera belongs to the American photographer John Reuter and is located in New York (it is often used by artist Chuck Close), while another belongs to portrait photographer Elsa Dorfman. The last 20x24 camera whose whereabouts is known occupies the central hall at Supersense. 'The monster', as it was endearingly called, is the only camera that can be accessed easily, as it is available on-demand and for hire, and its use relies on the scarce leftover material of the Polaroid Corporation<sup>65</sup>.

In the previous chapter, Polaroid practice was discussed in terms of its material changes and the effects they have had for the perception and experience of the practice, ultimately transforming it. Polaroid was also discussed in terms of materiality and mediation, and how the practice of Polaroid photography, through its sensorial and corporeal engagement with the medium, enables the experience of the photo action. Consequently, this chapter, building on some of the case studies I addressed before, focuses more thoroughly on the immateriality tropes that surround the digital archive (image or text) and the way this has affected how people perceive the differences and commonalities between analogue and digital media, resulting in innovative practices that seek to make sense of these processes. In order to make sense of the conversion processes described above, the first section of this chapter addresses the origins of digitization, the utopian tropes that surround the digital object, as well as their implications for its accessibility and preservation. The second section of this chapter focuses on the values and meanings the digital image acquires when it is transformed and imbued with 'analogue materiality' (indexicality), and the way analogification – digital-to-analogue transformations – can be understood as a response towards digitization and the expectations of 'going digital'. Through the concept of analogification (see below), I shed light on the tension between analogue and digital technologies, leading to the third section of this chapter in which I argue that rather than standing in opposition analogue and digital are two instantiations of the photographic image

<sup>65</sup> Since the demise of the Polaroid Corporation, film production for the 20x24 has been handled by Reuter and his team in a workshop outside Boston. Reuter purchased the leftover chemicals from the Polaroid factory and have been using them on demand since then. However, in 2016, Reuter announced that the 20x24 Studio will be closing its doors due to a lack of materials to continue to use it.

that work through a “logic of supplementarity” (Derrida 1976). The processes of analogification, as much as digitization, thus, confirms the fluid and changing character of the mediated object, at the same time as it indicates the relational character of media technologies (Bolter and Grusin 2000): people are not simply working through the media, but with them, as a practice.



*(Fig. 23) 20x24 Polaroid Camera at Supersense*

### **I. Digital to analogue conversions**

The first time that I saw the 20x24 Polaroid camera being operated was on a Friday morning. Elisa, the camera operator, had come to take over Supersense’s photographic appointments (portraits), and to make the required digital-to-analogue conversions. That day, Elisa was scheduled to print out a picture commissioned by a German artist. The commission entailed converting an image originally taken by the artist into a 20x24 Polaroid one. The process of conversion required the artist to scan the original analogue image and send it to Elisa via email, who later downloaded it to Supersense’s iPad. Following that, the iPad was set up on a specially designed cradle – a wooden frame that holds the iPad in the place where the camera lens previously was – to expose the film (by allowing the light to come through the camera). Following the exposure, the back (“cassette”) of the camera had to be moved (by two people) into the film processor – a machine that holds the rollers that coat the image

with the chemicals – to later manually cut the picture, peel it (negative from positive)<sup>66</sup>, and hang it to dry.

The complex process of converting a digital file into a 20x24 analogue Polaroid picture accounts for a fascinating, and somehow paradoxical phenomenon in which the digital image is not the final stage of the photographic object, but a transient one. I call this processes analogification. The concept of analogification, different from that of ‘analogization’ used by Paolo Favero to describe the “materialization that takes place in digital environments” present, for example, in 3D printing (2016, 210), refers to the conversion of digital files into analogue format. By following a similar core to that of the concept of digitization, I have chosen the suffix *-ification* to denote the process of conversion, transformation and becoming, as opposed to simply the action of it<sup>67</sup>. Analogification (as much analogization and digitization) can be understood in the context of remediation practices, that is, “the representation of a medium in another medium” (Bolter and Grusin 2000, 45) with the intention of refashioning the old or new media by either marking the presence of the older media or effacing it (Ibid 48).

The concept of remediation was introduced by Marshall McLuhan who argued that the “the ‘content’ of any medium is always another medium” (1994, 10), and refers to the way in which one medium is incorporated into another (Bolter and Grusin 1995, 45). Here, rather than focusing on the transposition of the content of one medium into another, I will focus on the process by which digital media is converted into analogue, and the values it acquires in this process. The purpose of establishing this concept, as it will be seen throughout this chapter is to highlight the unfixed and fluctuating nature of the digital photographic object, an issue that problematizes the messianic tropes of digitization that claim the digital form as the final stage of technological progress (Negroponte 1995, 4), and argue against the idea of the digital or analogue media are independent from each other.

<sup>66</sup> Though the 20x24 image does have a positive and a negative, the negative is not reproducible.

<sup>67</sup> The suffix *ation*, whose origin could be traced either from French or Latin, “denotes an action or an instance of it”, “a result or product of an action” (Wiktionary n.d.). Similarly, though not entirely, the suffix *-fication*, from French and Latin *-ify* – become – and *-ation* – process of–is often used for turning verbs into nouns of action, to denote “make or produce; transform into; become” (Ibid). This suffix has been used numerous times to refer to personal or material processes in which people or things are turned into something else; an online search of the suffix gives varied results: beautification (the action of becoming beautiful) or massification (the process of bringing something to the masses). What both of these suffixes have in common is that the two of them denote an action, yet in the case of the later, it could be said that there is an emphasis on the process through which the image moves from one state to the other, that is, the process by which something transforms into something else.



(Fig. 24) 20x24 Image Processing, Collage

### Digital ‘Immortality’

Digital, and the act of digitization<sup>68</sup> refers to the action of turning analogue originals into ‘bits and bytes’, that is, “converting continuous data into a numerical representation” (Manovich 2002, 49). Though digitization is normally thought of as a recent phenomenon that concerns the turning of analogue documents into digital files (such as music and photography), Ruth Rikowski notes that digitization dates back to the 1970s, a period in which different institutions started to use computer systems to catalogue their collections in order to simplify access. With a core mission to “educate, elucidate, preserve, promote and disseminate culture in order to reach out to new audiences or refresh former ones” (Deegan and Tanner 2006, 1), the first digitization projects started in small institutions, libraries and archives. These first conversions were carried out with the support of big technology companies, such as Xerox and Kodak, with the intention to ease the access, classification, and retrieval of archives and documents by straightforwardly directing users to the correct archive, and be less burdensome in physical terms. It was during the 1980s when the

<sup>68</sup> Here I am referring to digitization as the transformation of analogue objects into digital ones. In terms of information, digitization can be traced back to the telegraph, a nineteenth century device that used electric signals to communicate (unlike the telephone, which uses analogue signals).

conversion of analogue objects into digital data started to be carried out systematically; and by the 1990s the cost associated with digitization had fallen and the storage capacity had grown, and “development, libraries, sometimes in academic partnerships, began programmes to digitize complete books and manuscripts” (Deegan and Sutherland 2009, 127). Beyond easing access, however, digitization was also concerned (and continues to be) with the preservation of archives, for example, of nineteenth century manuscripts printed out on acidic paper (Ibid 130). However, once digitization had become the norm, it soon became evident that preservation was not only related to digital surrogates, but also to those files that were born digital.

In his seminal book *Being Digital*, technologist Nicholas Negroponte noted that the process of digitization, which he described as the transformation of atoms into bits, was “irrevocable and unstoppable” (1995, 4), and the digital object would have no physical constraints. However, the imminent and permanent characterization of digitization soon proved that the transformation of analogue objects into 0s and 1s was much more convoluted than what the optimistic Negroponte expected (for a detailed account on the transformation of media into data, see Manovich 2002). Deegan and Sutherland argued that “preservation of the analogue world... is largely a question of maintaining the material substrates upon which they are inscribed” (2009, 160). “By contrast, digital artefacts require urgent active measures to be taken to prevent their loss, for they do not respond well to neglect, benign or otherwise” (Ibid, 155). Their argument suggests that the “hundred years of life expectancy” (Rikowski 201, 4) present in the promoters of the first digitization projects proved to be utopian, to say the least. The “continuous process of creating and maintaining the best environment possible for the storage and/or use of an artefact to prevent damage or degradation and to enable it to live as long a lifetime possible” (Deegan and Tanner 2006, 3) proved to be a cumbersome task due to the continued fast-pace changes in digital technologies.

Jonathan Sterne argues that one of the main reasons behind the fast driven changes that have complicated access to digital objects has to do with the assumption that computer-based technologies are “halfway technologies”, that is, “not-fully-accomplished technologies” (2007, 23). This ‘not-there-yet’ conception of digital technologies, driven by Moore’s Law<sup>69</sup> which established that the “density of integrated circuits doubled every year” (Abelson 2008, 8), complicated the “ability of the computer (or a new software) to reproduce

<sup>69</sup> Moore’s Law, created by Intel founder Gordon Moore in 1965, isn’t an actual law, but more of an imperative taken by the computer engineers to secure market circulation by making sure “that computer power doubles every year” (Sterne 2007, 19).

the behaviour of its predecessor” (A. Butterfield, Ngondi, and Kerr 2016). Still, the material changes in software and hardware that digital technologies went through were not only driven by Moore’s Law, but by a rhetoric in which every medium capable of fulfilling the promise of its predecessors (Bolter and Grusin 2000, 60). This supposed capacity of the medium to constantly improve generated expectations towards computerization (and digitization) processes to be set in the future as opposed to the present<sup>70</sup>. The instability and “variability” of the digital technologies (Manovich 2002, 36; Geismar 2013, 259) that resulted from the material changes and rhetoric framework, however, has meant that digitization has not been able to secure “backwards compatibility”, making the promise for longevity a lot less organic and irrevocable than digital enthusiasts anticipated.

Writing on the ‘tropes of digitization’, Jean-François Blanchette, noted that the dominant assumption that the “digital age fundamentally differs from all previous information epochs insofar as information has finally achieved what it has aspired to throughout history, namely, unburdened itself from the shackles of matter<sup>71</sup>” (2011, 1042) is highly problematic, mainly due to the often overlooked material dimension of information. Accordingly, in a quick analysis of the infrastructure needed to maintain electronic correspondence he noted,

“The sending of a simple email over the Internet requires the correct functioning of thousands upon thousands of heterogeneous material and logical components, connected together in a network of staggering complexity. Such a system must be able to accommodate, among other things, growth in size and traffic, technical evolution and decay, diversity of implementations, integration of new services to answer unanticipated needs, emergent behaviors, etc.” (2011, 1046).

This material dimension of electronic communication was also depicted by Sterne, who described his (web) ‘surfer friend’s’ need for a “keyboard, mouse, and a monitor hooked to a computer, and in the neighborhood of a phone line, DSL, Ethernet, or other kind of connection...which continuously increases scale” (2007, 17). Sterne’s description of the

<sup>70</sup> Arguably, this could be said for most media technologies, however, Sterne stresses that there are two types of newness in new media. (1) The new media concerning other media. (2) And the newness within the media. In the case of computer-based technologies, they correspond to the ‘newness within’, making them halfway-there technologies (2007, 18).

<sup>71</sup> The notion of immateriality suggested by Blanchette was already present in the promises raised by the telegraph and its metaphysical communication, an issue that Jonathan Sterne relates to Descartes and the tales of disembodied experience (2007, 17). It is central, thus, that to understand the shift from analogue to digital objects to address the process of digitization—the transformation of atoms into bits and atoms once again—and what it entailed for the materiality of the analogue and digital object.

material infrastructure needed to sustain digital communication suggests that bits continue to be instantiated in atoms. Still, and regardless of the material dimension of the digital, noted by Blanchette. Katherine Hayles has argued that the powerful and prevalent rhetoric of computerization has continued to affect people's perception of digital and analogue media, by stating:

“The great dream and promise of information is that it can be free from material constraints that govern the mortal world... In the face of such a powerful dream, it can be a shock to remember that for information to exist, it must always be instantiated in a medium...” (1999, 13).

Hayles argument challenged the utopians who believed that following digitization “the medium [was] no longer the message” (Negroponte 1995, 61) and brought forward the discussion about digital objects and the necessity of preserving the medium to guarantee its accessibility. This meant that no longer were “brittle papyrus and crumbling mortar the most severe threat to our cultural heritage today”, but rather, as Mary Feeney puts it, “the death of the digit” (Deegan and Tanner 2006, 5).

The vulnerability of digital information (text, image, etc.) was something that I encountered many times during my fieldwork. For Tory, one of the founding members of the film photographic project, *Film is Not Dead*<sup>72</sup>, the motivation behind film photography and Polaroid can be explained in the following way:

“I think it is because we have lost such a big thing. We've lost albums, we've lost physical images. There's been times in which my hard drive broke and I lost a lot of my photos. For example, when Charlie [partner] was working [on a photographic studio], a customer came and told him he needed him to get an image from a hard drive and work on it in Photoshop, but the file was not compatible because it was too old, so it wouldn't work, and that was lost forever because it was a digital file. I think that is really sad and that is one of the reasons why people are coming back to it [analogue]. If you take digital, you need to bring them into a place, have them printed, etc. Whether with analogue, you know that they are going to be there unless there is a fire or something like that.”

<sup>72</sup> Film is not dead is a London based project that started in 2010 as a blog to later expand into refurbishing and selling second-hand film cameras. They have a stall at London's Brick Lane market two days a month.



In Tory's account it is evident that the so-called immortality of the digital object is challenged by the fragility of the medium in which the file is instantiated, which in turn – due to hardware or software decay, or backwards (in)compatibility – can easily be lost. Furthermore, Tory's account evidences the conflicting views that surround the digital object, which on the one hand, supposedly “liberated information from matter”, while on the other hand, exposed its fragility, as “data [needs] to be moved regularly and changes in software and hardware [dictate] constant reformatting” (Deegan and Tanner 2006, 19).

Hence, the fragility of the digital object exposed the equivocal and biased rhetoric that fed the expectations towards digitization and, in turn, made evident the tension between utopianism – in the form of immortality – and the material, physical constraints of the objects, be they analogue or digital. This suggests that despite the vulnerability of paper-based archives, often purported as one of the main reasons behind the digitization programs of the 80s and 90s (dismissing the fact that paper-based objects have outlived digital by thousands of years already), “in just 50 years from now the human record of the 21<sup>st</sup> century may be unreadable” (Deegan and Tanner 2006, 7).

### **Back-Up Strategies**

In light of the mortality and backwards ‘incompatibility’ that haunts the digital object, many of the conversations that revolved around Polaroid's material outcomes (besides the role of the body explored in the previous chapter) mentioned the safeguarding of memories as one of the main reasons for using it. Mary, who was introduced previously discussing the role of the community in her practice, told me about this:

“Once you lose the phone, with it you lose all the shots. How many wished they have made tangible shots. So, yes, once of the reasons I shoot Polaroid is because of the physical, tangible thing.”

To later clarify,

“The precariousness of the digital has made my generation... have a sense of caution about ‘the cloud’<sup>73</sup>. When we age we would have nothing to reach for.”

<sup>73</sup> By ‘the cloud’ Mary is referring to the online platforms that allow users to access their files on-demand. The Cloud means that the storage of files is not done on physical drives, but rather online, changing the dependability of the computer while accessing them. The cloud has also been claimed as a safe way of backing up one's digital files as the archive is not ‘located’ in the medium, supposedly making it less vulnerable.

Echoing Mary's words, when I asked Kaps about the motivations behind the digital-to-analogue conversions services offered at Supersense, he noted,

“Because you can touch it [the analogue], you can keep it, and preserve it. People find out all their digital files after three years won't be accessible anymore.”

In both Mary and Kap's words it is possible to note an anxiety towards digital technologies and the way the fast-paced change threatens the accessibility of the digital object, in this particular case, photographs. With this in mind, I wondered whether the processes of analogification that proved to be so successful both at Supersense and with the Instant Lab were linked to prevailing anxiety regarding the accessibility and preservation of the digital object, with these processes assuming the role of the back-up<sup>74</sup>.

While examining the public perception of back-up, I stumble across a survey carried out by a back-up service company based in Stockholm, which after surveying 4,257 respondents from 129 countries concluded that between the years 2008 and 2009, 66% of surveyed PC users had lost pictures from their home computers, 42% in the past year, and a strikingly 71% respondents claimed to be worried about losing their pictures (“Kabooza Global Backup Survey” n.d.). What the survey's sample demonstrate is that there is anticipatory anxiety about the accessibility and preservation of the digital file, for which the back-up serves as a remedy. Still, the contradiction of the back-up becomes evident, especially when considering Mary's concerns regarding ‘the cloud’, in the light that both the digital files and their back-ups are instantiated in the same digital infrastructure, and consequently, vulnerable to the same ‘threats’ of accessibility. This issue of vulnerability was further expressed by one of my interlocutors.

“In the case of Polaroid, is like you have complete control over it. If you want to destroy it or kill it or stick it or give it to someone, its mine, and your agency over it is total. But with digital media, there is an illusion of control. We are allowed control through the software, but if the software breaks, I can't do anything to fix that. This

<sup>74</sup> “A resource that is, or can be used as, a substitute when a primary resource fails or when a file has been corrupted. The word is also used as a verb, to **back up**, i.e., to make a copy in anticipation of future failure or corruption” (Andrew Butterfield and Ngondi 2016).

is not any sort of revolutionary [thinking] but the fact is that we don't have any power over the image anymore, any kind of control over the technology, whether is images or music, and I think that is why vinyl...you have a sort of ownership with vinyl whether with Spotify, iTunes or mp3 you feel like your relationship with music is conditioned. If one of the corporations decide you no longer have the right to listen to that music or look at those pictures, there is nothing you can do. And I think that this is what young people find so attractive about analogue technologies it's a much more human relationship. [Polaroid] might fail, might let you down, it might be expensive, it might be unreliable, but at least you can kind of conceive it in your own way.”

My interlocutors remarkable elucidation regarding the agency one has over the ‘physical’ object (as opposed to the digital one) confirms that although the realistic security of the digital object might actually be higher than that of the analogue, Polaroid practitioners’ perception is that the digital can no longer be considered ‘safe enough’. Hence, it can no longer be trusted to secure the accessibility of the photographic digital object. Furthermore, my interlocutor’s account also suggests the pressing issue of digital ownership, whereby it is no longer clear who owns the content: the producer, or the platform in which the content is instantiated. In this way, the trust my interlocutors place on analogue objects (as opposed to digital) is related to a lack of agency in digital processes, where the digital object is perceived as a black box, an ‘input/output machine’ (Latour 1994, 36), which can be reclaimed by processes of analogification (see below).

## **II. Becoming Analogue**

Carlos is a creative member of the SCS Facebook group, constantly experimenting with both digital and analogue photography in various formats and techniques. Carlos photographic practices include 35 mm, different Polaroid formats (600, SX-70, peel-apart-film), pin-hole, and digital photography, and other practices that involved the use of the Instant Lab or other media that turn digital photographs into analogue ones. When I met him in a cafe in Central London during the winter of 2017 he had brought along an album with some of his Polaroid pictures, most of them experimental processes depicting different digital to analogue remediations. While going through the pages, one of the pictures caught my attention. In the square-framed Polaroid picture lay an undecipherable image that mixed both analogue aesthetics (soft, washed-out colours) with pixels. Carlos told me the image had been ‘made’

(as opposed to ‘taken’, see chapter 2) by shooting an instant Polaroid photograph of the computer screen, a process that exposed pixels and other digital traces into the analogue surface of the image. Another process that Carlos introduced me to that day corresponded to the ‘reclaiming’ of negatives. By bleaching the negative of a peel-apart Polaroid picture, Carlos was able to ‘reclaim’ the negative and able to print out positives of that image<sup>75</sup>. When I enquired about this process, Carlos explained that for him it had to do with an interest for both accessibility and aesthetic results. For example, taking a peel-apart image of a digital picture enabled him to produce both a positive and negative of a digital image, this allowed him to ‘reprint’ the digital image if needed. About this, Carlos stated,

“The quality of a print [if digital] is not going to last. In 10 years or less it’s not going to have the same clarity anymore. [Whereas with analogue the] image can last 80 years...you can’t really compare.”

Likewise, by transforming a digital image into film format, through shooting a Polaroid image of the screen, he was able to produce an analogue version of a digital file enabling him to experiment with the aesthetics (surface) of the image, like the process of ‘revealing’ the pixels demonstrated.

The aesthetic dimension of Carlos’ processes – also present in the conversion process requested by the German artist described in the previous chapter (which involved the scanning of the original analogue image transforming it into a digital one, to later transform it once again into analogue) and in the ones I made of a famous jazz performer – suggests that on top of securing a physical outcome of the digital image (done with the intention to create a back-up) there is an additional dimension present in analogification processes that has to do with the aesthetics of Polaroid. Within this aesthetic dimension, Polaroid practitioners’ intend to reclaim what in their eyes digital has curtailed, that is, the possibility of making mistakes. Meanwhile it also imbues the digital image with the values of analogue, that is, with the indexical quality that my interlocutors’ believe is inherent to analogue photography (see next section).

<sup>75</sup> Although peel-apart Polaroid pictures produce both a positive and a negative, this negative is not reproducible. However, by bleaching these negatives practitioners’ reclaim the negative that can later be used to print out a positive.

## Analogue Interference

The shift from securing a material outlet for the digital image (as a back-up) into that of the aesthetic realm is related to what Leo, Supersense's audio expert, master record cutter, and Polaroid practitioner expressed as the 'anti-perfection drive'. For him, this drive,

“[emerges out of] people fear of imperfections, of ‘the one-shot’. With digital [photography and music] their mindset is on retaking, retouching, fixing, etc. With analogue, you just need to go and do it, don't worry about the imperfections.”

Following Leo, analogue media, as opposed to digital, “allow ourselves to be affected by forms and substances that we do not attempt to control or order” (Introna in DeSilvey 2017, 6). The uncontrolled in Polaroid, given by the unpredictability of the results, that is, the 'imperfections', are associated with feelings of genuineness, as opposed to the sterile (controllable) aesthetics digital cameras can potentially produce (the anti-perfection drive will further analysed in chapter 4). Even more, on that same occasion, Leo told me, “we [Supersense] are not interested in selling the best sound quality, but an experience... At the end it is not about numbers [digital] it is about the music, the feeling of the record, the experience.” For Leo, one of the reasons people continue to use analogue technologies has to do with the perfection digital technologies promote through processes of post-production, and the corporeal experience that analogue technologies offer in contrast, and which he relates to human-like qualities, that is, imperfections.

Leo's disregard for perfection was not exclusive to him. For Rhiannon, the imperfections of Polaroid were the reason she preferred the medium over other analogue instant ones, like Fujifilm. According to her,

“[Fujifilm]<sup>76</sup> is too stable. It doesn't allow you to play with light, it is too fast, there is an emotional disconnect [with the medium]. Polaroid has the marks of a troubled birth... with Fujifilm all births are the same.”

Both Leo and Rhiannon's accounts show that the imperfections in the surface of the new Polaroid image, rather than being a drawback revalorizes the practice by imbuing it with human-like characteristics they ascribe specifically to analogue technologies, and which make them more pleasurable. These feelings towards imperfections expressed by both of my

<sup>76</sup> Fujifilm is a Japanese brand of film photography that has a range of instant cameras which are called Instax.

interlocutors can be further illuminated by Brian Larkin's argument regarding *interference* of the media in the context of sound reproduction in Nigeria. Larkin argued that the interference depicted in the surface of the object (in this case, cinema) is not only physical but speaks loudly about the social and material relations that give rise to it (Larkin 2004; 2008).

With this in mind, when a digital image is converted into Polaroid analogue format, its surface is engraved by flames (the name some practitioners use to refer to undeveloped chemicals in the image) and these 'marks' render the image real. In this case the real is not only related to the errors but also to the connection the image has with the world (indexicality). For Polaroid practitioners', then, these marks, rather than being considered flaws, become "valorised and brought into the sphere of the aesthetic", turned into a message of culture (Tsivian 1994, 105); a message that communicates a new sensibility practitioners have towards the material imperfections that created the image (as opposed to the representation). Consequently, and regardless the 'imperfect' nature of the analogue image (from which the new practice of Polaroid cannot be separated), in a similar way to those described by Chivers and Biddinger regarding the vinyl community – who describe "records as special, collectors compare[d] them to CDs and MP3s, which they describe as disposable, sterile and technocratic, all qualities associated with the inauthentic aspects of consumer culture" (2008, 193) – my interlocutors accounts also favoured the analogue over the digital due to its imperfect condition that allows them to distance themselves from what they perceive is today's perfection's anxiety.

### **The Value of Analogue**

The anti-perfection drive expressed by Leo, which according to him is behind what motivates the use of Polaroid as an output for digital files, demands that we pay attention to the way analogue photography perception has been altered through time. In *Photography. A critical introduction* Liz Wells discusses the way in which photography came to satisfy previous social needs, in this case of portraiture and documentation (Wells 2000, 13), rather than serving as an agent of social change. Tracking the way photography came to be established as naturalistic representation, Wells argues that photography "begins to emerge as the most commonly used and important means of communication for the industrial age" (Ibid, 16), and soon after, critics such as Baudelaire started to consider photography "as mechanical, soulless and repetitive" in opposition with art, "which he considered to be the most important sphere of existential life" (Ibid 15). Wells' argument regarding the nineteenth

century perception of chemical photography is of interest when considering that today, in the light of digital, chemical photography seems to stand for exactly the opposite: chemical photography (and Polaroid) today are imbued with notions of authenticity, while digital stands for the mechanical and soulless. The different meanings photographic technologies are given is further expressed by British artist Tacita Dean. In the context of his exhibition *Film* at the Tate Modern (2011), Dean argued that “both film and digital are pictures, perhaps copies of one another, but they are not the same thing – one is light on emulsion and one is light made by pixel, and they are also conceived, made, and seen differently” (Dean 2012, 13). For her, “Film is a journey... [there is an] importance of grain, chemistry, flaw, alchemy, magic”. Meanwhile digital is “practical, cheap, versatile, cumbersome” (Sullivan 2013). What this altered perception of chemical photography suggests is the way technologies are revalued in the light of the new, that is, the way “the media of the present influence how we think about the media of the past or, for that matter, those of the future” (Winthrop-Young and Wutz 1999, 12), and moreover, the way technologies’ meanings are not static but constantly changing.

Accordingly, going back to Mary’s fear of having nothing to reach for once she’s aged, and Carlos’ insecurity regarding his inability to access his photographs in a few years’ time, it is possible to assert that the physical transformation of the photographic object (from atoms into bits) has also transformed the way the new digital image is perceived and experienced. It is arguable, then, that analogification processes, besides being a reaction towards digital accessibility and the ‘perfect’ aesthetics of the digital image, are also concerned with the values that my interlocutors feel Polaroid is imbued with. This explains why, if the processes of analogification were strictly motivated by a material outcome, like the cases of analogization which intend to give material shape to abstract ideas (Favero 2016, 212), printed digital versions of the photographs would be seen as suitable as analogue ones (and much cost effective). However, the pragmatism and cost of the processes seemed to be something that my interlocutors were not concerned with, so much as having ‘the right’ analogue outcome. In this way, the commission done by the German artist suggests that rather than it being about wanting an enlarged version of her original print or analogue aesthetics (easily accessed through digital filters), she wanted the Polaroid format because Polaroid, in her eyes, has certain qualities that other media can’t reproduce. Thus, printing out a digital output from a digital file wasn’t the answer if one wanted to assure the durability and preservation of ones’ images. The conversion of digital photographs into 8x10 and 20x24 Polaroids, along with the production of analogue negatives out of digital images (seen

in Carlos' practice), indicates that the processes of analogification are not so much about having a material outcome, but about the form in which that outcome is produced and experienced.

This search for the right output for the digital file can be further explored by considering Jacques Derrida's reflection on Freud's *Mystical Writing Pad*<sup>77</sup>. In *Archive Fever* Derrida ponders the way media technologies could have potentially altered Freud's conception of the psychic apparatus, affecting psychoanalysis as a whole, and for which he concludes, "media technologies are not passive conveyors of content, but actively shape archives and users... To put it more trivially: what is no longer archived in the same way is no longer lived in the same way" (Derrida 1996, 18). It is evident, then, that in digital-to-analogue conversions the choice of Polaroid for preserving and materializing images has to do with a perceived quality of Polaroid as 'the right medium', as opposed to actual considerations of the durability of the physical object.

With this change in perception in mind, the discourses that surrounded the analogue object at Supersense ("make photos real," "pixels into real molecules," and "vinyl is forever"), all suggest that Polaroid has a value, which digital can only evoke. Hence, when my interlocutors expressed anxiety towards the accessibility and durability of their photographs and the need of securing a material outcome for them, they were also noting that Polaroid was 'the right' output (as opposed to other material outcomes, such as digital prints). It becomes apparent, then, that analogification is as much about preserving and accessing the photographic object as it is about the form of the object and the experience that this form enables – echoing Derrida's analysis that "archivization produces as much as it records the event" (1995, 17), and to a further extent, McLuhan's famous statement that, "the medium is the message" (1964).

### **Engraved Reality**

In recalling the first time he encountered the gramophone as a child, writer Raine Maria Rilke<sup>78</sup> remarks, "What impressed itself on my memory most deeply was not the sound from

<sup>77</sup> Freud, in an attempt to analyze the structure of the mind, uses the writing pad – a slab of dark brown resin or wax with a thin transparent sheet, and a semitransparent celluloid layer – as a metaphor to describe the perceptual apparatus of the mind. In his essay, Freud distinguish two types of writing surface, that of the chalk upon a slate—"the receptive surface which retains its receptive capacity for an unlimited time and the notes upon which can be destroyed as soon as they cease to interest me, without the need for throwing away the writing-surface itself?" (Freud 1997, 208) – and that of the writing pad, which is able of both holding a trace and allowing a clean surface.

<sup>78</sup> In *Gramophone, Film, and Typewriter* Kittler, while addressing the engraved quality of the gramophone, recalls Raine Maria Rilke's *Primal Sound* (1919), a story that narrates the author's first experience with the gramophone.



the funnel but the markings traced on the cylinder; these made a most definite impression” (1919 in Kittler 1999, 39). Rilke’s account resonates with that of Rhiannon for whom the value of Polaroid is in the traces it carries. Her decision not to use Fujifilm due to the media not bearing “the traces of a troubled birth”, besides revealing an aesthetic preference for imperfections, also suggests Rhiannon’s thought-provoking perspective regarding the expectations towards the archive. The traces of the troubled birth, thus, expand the expectations of the archive as the place where the information lies and is safeguarded (Derrida 1996, 9), towards an archive that is also capable of holding the material traces of its own inscriptions. This relationship between the media and the traces left in its surface was developed by German media theorist Friedrich Kittler in his study of the different inscriptive media technologies (gramophone, film, and typewriter). For Kittler, these three inscriptive media can be thought of in light of Lacan’s ‘methodological distinctions’: the real, the imaginary, and the symbolic (Kittler 1999, 15). According to Kittler, the gramophone, where “etch acoustic vibrations [are engraved] onto a rotating cylinder covered in tinfoil” (1999, 21), is connected to the notion of “the real”, that is, the uncontrollable, unconscious traces of the mind, because “regardless of meaning or intent, [it] records all the voices and utterances produced by bodies, thus separating the signifying function of words” (Winthrop-Young and Wutz 1999, xxviii). Film corresponds to the realm of the imaginary, where disconnected parts (film stills) create the illusion of continuity (Ibid). Meanwhile the typewriter corresponds with the realm of the symbolic, where “linguistic signs in their materiality and technicality” (Ibid). However, given that Kittler connects film with representation, and that my focus here is with the materiality of the image, I have decided instead to focus on the gramophone, because, similarly to Polaroid’s unpredictability, it “shifts the boundaries that distinguished noise from the meaningful sound, random visual data from meaningful picture sequence, unconscious and unintentional inscriptions from their conscious and intentional counterparts” (Winthrop-Young and Wutz 1999, xxvi).

With Kittler’s argument in mind, here Polaroid’s relation with ‘the real’ needs to be expanded from the notion of aura and hyperreality previously analysed (chapter 2), into that of the material inscriptions, that is, the engraved physical traces that confer the Polaroid image with a sense of reality. The understanding of photography (and other analogue media) in relation to the real needs to be thought of in relation to Charles S. Peirce’s concept of the index, developed as part of his theory of semiotics. For Peirce, the index corresponds to the causal connection between the sign (object) and the world, in which the “resemblance is due to the photographs having been produced under such circumstances that they were physically

forced to correspond point by point to nature” (1995, 106). Even so, the argument advanced by Peirce has been one that has accompanied photography since its origin. For photographic theoreticians such as Susan Sontag, for whom “a photograph passes for incontrovertible proof that a given thing happened” (Sontag 2008, 3), and Roland Barthes, the “having-been-there” (Barthes 2000, 40) of photography “underwrites the photograph’s believability” (Henning 2018, 13). Therefore, for both Sontag and Barthes, the value of photographs is in the technology’s capacity to register reality (Wells 2000, 32), that is, its ability to “usurp reality because first of all a photograph is not only an image (as a painting is an image), an interpretation of the real; it is also a trace, something directly stenciled off the real, like a footprint or a death mask” (Sontag 2008, 120). For visual theorist Tom Gunning,

“The indexicality of the photograph depends on a physical relation between the object photographed and the image finally created. The image on the photographic negative derives from the transformation of light sensitive emulsion caused by light reflecting off the object photographed filtered through the lens and diaphragm” (2008, 24).

Following the indexical argument, it becomes apparent that the physical link that the photograph maintains with its referent, that is, the light that engraves the surface of the image, similar to how gramophones “record all the voices and utterances produced by bodies” (Kittler 1999, 16), corresponds to the connection practitioners make between analogue media and ‘the real’, that is, photography’s “truth claim” (Gunning 2008, 27). Even so, as Gunning clarifies, the digital “image is formed through data about light that is encoded in a matrix of numbers” (2008, 24; Robins 2014, 6), an argument that technically-speaking confirms that the digital photograph is also engraved by light.

With the relationship between photography and light engraving in mind, the fact that Polaroid, through its ‘interference’ and ‘imperfections’, materially (and, according to Rhiannon, quite literally) depicts the physicality of the photochemical process from which it emerges (Robins 2014, 11), is at the core of my interlocutors’ perception of Polaroid’s relationship with ‘the real’ (fig. 25). This was something that Steve compellingly described in the following way,

“For some reason it absorbs a little bit of its time, and that’s what good about Polaroid, because it’s actually physical. The light affecting you is affecting the film; it carves the

image into the photographic film. You catch a little bit about the past, and there is only one of those, they are totally unique.”

According to Steve, Polaroid’s light engraving is what makes it ‘real’, an account that he later contrasts with digital photography, which due to its origin being ‘behind a screen’, as Kaps expressively argued, does not hold a material (light) connection with that which represents.

However, and regardless of digital photographs being as indexical as analogue ones (and hence, ‘real’), my interlocutors’ beliefs was that the digital was ‘unreal’ due to its lack of an index. Hence, despite “digitization transform[ing] the trace into the realm of binary code [it] does not destroy the physical link between photographed object, sensor data and the visible photograph” (Seppänen 2017, 189), the constant opposition of analogue and digital photography in terms of real and unreal corresponds to what Bolter and Grusin frame as the culturally compelling nature of photography outside of theoretical circles (2000, 30). Accordingly, rather than trying to undermine my interlocutors’ beliefs regarding photography’s ‘truth claim’ by defining them as incorrect (following the argument of Gunning and Robin), my interlocutors’ views can be understood by following Paul de Man’s distinction between ‘errors’ and ‘mistakes’. For de Man, a mistake is the product of an incompetence, whilst an error answers to a deep cultural necessity (Norris 1988, 13; Pinney 2016, 22). By following de Man distinction, instead of considering my interlocutors perception of digital being less real a mistake, I consider it to be an error, that is an “expression of a historical desire” (Bolter and Grusin 2000, 31) of a body sensorial engagement with the medium in response to the advent of digitization, along with a need to secure, and infuse their photographic objects with ‘reality’.

Furthermore, the capacity of digital images to be imbued with ‘the real’ following their conversion into analogue format indicates, once again, that for my interlocutors, Polaroid’s current use is not so much related to the content of the image, but to the pursuit of ‘the real’ through practice. This also suggests that analogue and digital media’s perceptions and expectations inform one another.



*(Fig. 25) Examples of Polaroid's 'Marks of the Troubled Birth'*

### III. Integrative Media

Besides revealing anxiety about the existence of the (photographic) object, and a desire to produce 'real' (understood as) indexical images, the processes of analogification also illuminate how analogue and digital technologies inhabit the same media environment. It becomes evident that to understand the place Polaroid has in today's digitally mediated world it is necessary to "move away from reifying the differences between the digital and the analog towards examining how they influence and affect each other" (Geismar 2013, 255). Proof of this influence can be seen in the capability of certain mobile apps, for example Instagram and Hipstamatic<sup>79</sup>, to remediate analogue forms through the use of filters. The use of these apps (which some of my interlocutors confessed to use) suggests that despite appearing as counterintuitive to the whole mediated, material, and real (the qualities practitioners attribute to Polaroid), digital mobile apps are being influenced by analogue aesthetics and used by the same people. Still, this influence cannot be seen as one-way, as digital can also be seen to influence the analogue in a process that extends beyond the aesthetic into different practices, as this section will show.

<sup>79</sup> Instagram, created in 2010, is an app that, through the use of filters, allow users to share analogue-looking pictures. The relationship of Instagram to analogue photography is undeniable when considering that Instagram's first logo was a Polaroid 1000 camera (later changed due to copyright infringement). Similarly, Hipstamatic is an app that allows mobile phone users to take square pictures and filter them in order for the images to look analogue. Hipstamatic name also recalls that of Kodak Instamatic camera, making the link between the app and analogue photography evident.

In his study of Instagram, Miller notes that the “photographic techniques that not long ago would have been the preserve of professional photographic studios... Instagram turned into simple, highly accessible technologies for mass usage” (2015, 6). In an interview with *Time*, *This Is Why Film Photography Is Making a Comeback*, one of the interlocutors came to a similar conclusion, arguing,

“Professional photographers are primarily fueling this growth [of film photography], thanks to a new generation of practitioners who grew up with digital but have begun dabbling in film, says Olbrich: “They discover the magic of film photography and many of them simply fall in love with it” (Laurent 2017).

According to the *Time*'s account, mobile apps have enabled digital practitioners to experience analogue photography by means of the ‘noisy’ (interference) aesthetics that these apps offer in form of filters, with the result that people migrate from digital photography to the ‘actual’ analogue media, confirming that remediation works both ways, with the old in the new and the new in the old (Bolter and Grusin 2000, 38).

One possible way of grasping the entwined phenomenon of analogue and digital is through the concept of “media ecology” or “media environments”. These concepts were originally developed by McLuhan (1994) and later Postman (2006), to refer to the ways in which different media technologies influence societies. McLuhan did not address the issue of ecology specifically, however, and according to Strate, his argument that “media is the message” contains the notion that media operates as a system, as opposed to being a transmitter of content (Strate 2008, 138). With a similar view to that of McLuhan, Postman notes in the *Proceedings of the Media Ecology Association*, ,

“We put the word ‘media’ in the front of the word ‘ecology’ to suggest that we were not simply interested in media, but in the ways in which the interaction between media and human beings give a culture its character and, one might say, help a culture to maintain symbolic balance (2000, 11).

These concepts, though criticized due to being deemed ‘technologically deterministic’, were later addressed (and defended) by Lance Strate, who argued that McLuhan’s notions regarding media had been misread (2008, 133). Strate noted that, “environments, media do not determine our actions, but they define the range of possible actions we can take, and facilitate certain actions while discouraging others” (Ibid 135). What Strate termed “the range

of possible actions” refers to the capabilities each media technology offers to the user. This was echoed by Miller and Madianou through the concept of “polymedia”. For them, polymedia refers to the way “users conceive of each medium in relation to an integrated structure of different media” (2013, 174), that is, in an ecosystem in which different media fulfil different expectations. And though Miller and Madianou’s concept of polymedia was originally conceived in relation to the communicative capabilities of the media as opposed its material ones, as in the case of McLuhan, both concepts are productive when approaching the interrelation of analogue and digital technologies (Martínez 2018, 1), and the importance of understanding them as integrated structures (Miller and Madianou 2013, 183).

One of the most compelling accounts I encountered during my research regarding this, was by Ralph, for whom the choice of media had to do with what they offered (aesthetically, experientially) rather than an ontological difference.

“I don’t like the distinction analogue and digital [photography] creates, I feel it alienates people from the practice. I don’t know about others, but I see them as working in harmony. If I was to take sports photography or somebody skateboarding or children, Polaroid wouldn’t be my choice because of how fast they move, with Polaroid you will miss the shot.... Certain cameras can do certain things.”

Ralph’s words suggest that rather than existing in opposition, digital and analogue possess different “affordances” – the capacity of artefacts to act upon the environment (Gibson 1977, 140) – which can either be explored separately or integrated with one another. Hence, digital-to-analogue conversions add a density capable of imbuing the digital image with the traces of ‘the real’, and ‘secure’ the digital object by producing an analogue instantiation of it. Whilst analogue-to-digital ones enable the analogue image to inhabit a virtual space where its reach far exceeds that of the analogue image, at the same time influencing people’s expectations (and desires) regarding photographic practices. What is the nature of the relationship between analogue and digital photography, which, despite working in integrative ways, are often described in opposition, however? The next section seeks to illuminate this oppositional definition.

### **Logic of the Supplement**

Despite a spirit of integration, for some, analogification was not exempt from irony. For Maya, Supersense’s letterpress expert in charge of operating the 1800s Plate Press and the

1960s Korrex (and also an artist and Polaroid practitioner), the whole process of turning a digital file into a 20x24 Polaroid picture was simply, in her own words, “pointless.” When she witnessed Elisa and me preparing the camera and setting up the processor along with the chemicals and the photographic film, Maya couldn’t help but express how “senseless” the whole process appeared to her. “Why take an instant picture of a picture?” She asked ironically, while addressing the waste of scarce and expensive materials used for the 20x24 picture in what for her was a “valueless digital file.” Besides the issue of cost and resources, Maya also mentioned the contradiction of transforming a digital image into an analogue one, a process that for her somehow betrayed the ‘real’ (indexical) nature of Polaroid.

Maya’s critical view of the analogification processes that were being carried out not only illustrates the conflicting feelings these conversions evoked for some, but also reinstates the established hierarchy between analogue and digital objects, along with the opposition between the indexical (real) and the digital (Gunning 2008, 40). Still, Maya’s view was rather isolated, as, for most of my interlocutors, digital practices certainly facilitated not only the processes of analogification, but also the practice of photography (and audio recording) in general. Martin, one of Maya’s colleagues who worked in the audio section of Supersense, upon hearing her opinion told us: “Doing it completely analogue wouldn’t make any sense, the cost would be too much, and to be completely honest, digital has amazing quality”. Martin also expressed similar thoughts about the conversion of digital audio files for master record cutting<sup>80</sup>, and the conversion of digital video signals into analogue ones in the shape of vinyl video<sup>81</sup>, which although different to Polaroid, still resonates with it.

After hearing Maya’s strong opinions, I decided to ask Florian Kaps for his thoughts regarding the digital-to-analogue conversion services offered at Supersense and whether he ever felt that these processes ‘corrupted’ the spirit of the analogue object. To this, he passionately told me.

“This is exactly what I want to specialize in [analogue conversions]. This is the analogue... and if you want to preserve your digital forever you can easily turn it into some beautiful analogue medium. The analogue is so strong that it even can add

<sup>80</sup> Master Record cutting consists in using a lathe to cut a groove in the surface of a lacquer-coated aluminum disc in real-time.

<sup>81</sup> As its name suggest, vinyl video is the conversion of digital audio signals into video format. Invented by Austrian artist Gebhard Sengmüller and scientist Martin Diamant, the technology seeks to enable turntable users to play both audio and video through the record player. For more information, visit [vinylvideo.com](http://vinylvideo.com)

magic to digital files. If you run [the digital] through a tube amplifier or a Polaroid, it looks much denser than the digital. I'm a big fan of that. And I think this is a very important specialty that I want to offer at Supersense because I also take my pictures with the mobile, that is why I ordered the 4x5, the 8x10, and the 20x24 inch Instant Labs. I love the combination of both.”

Kaps' words, along with those expressed by Ralph, Martin, and Maya suggests that digital and Polaroid photography both operate through a 'logic of supplementarity', that is, that despite being defined in terms of contrast, the analogue and the digital both supplement one another, with each adding what the other (apparently) lacks.

While deconstructing Rousseau's opposition between writing and speech, Derrida notes that Rousseau – for whom the former is “nothing but a mediated representation of thought” (1976, 144) – both valorises and disqualifies writing at the same time (Ibid, 142). Providing a new reading of Rousseau's opposition, Derrida argues that the supplement allows Rousseau to “say the contrary without contradiction” (Bernasconi 2014, 20). “Writing as an addition (...) comes to be seen as anterior to speech in a way integral to it. In other words, that something can be added to what is initially thought of as in and of itself complete, and is presented as an origin, reveals that the lack in sense precedes the origin and contaminates it” (Ibid). Moreover, when addressing Plato's priority of speech over writing in *Phaedrus*, Derrida acknowledges that although Plato operates a “logic of exclusion”, in which writing is devalued over speech (Norris 1987, 32), most Western thought still relies heavily on writing<sup>82</sup>. For this, Derrida concludes that in the logic of supplementarity there is a “double movement”, in which “opposites merge in a constant *undecidable* exchange of attributes” (Norris 1987, 35; Wood and Bernasconi 1988, 19). Regarding this, Culler explains that though Rousseau condemns writing, “writing is repeatedly brought in to compensate for the flaws in speech, such as the possibility of misunderstanding (Culler 1997, 10). This ‘undecidability’ that Derrida observes in the supplement, thus, resonates with that of analogue and digital photography, in which despite being defined by contrast, neither is ‘superior’ or a danger to the other.

Using the logic of supplementarity, thus, is useful to shed light on the relationship between Polaroid and digital photography, as it demonstrates that despite digital often being hailed as the unwanted opposite of Polaroid photography, both photographic practices are constructed, both in discourse and practice, ‘supplementarily’. This complex relationship

<sup>82</sup> According to Derrida, though Plato rejects writing as dangerous and deflecting logos from the truth, his use of the myth in order to explain it suggests Plato's inescapability from writing (Norris 1987, 33).



between analogue and digital media was also identified by Gitelman and Pingree while discussing the level of accuracy of new media in relation to its predecessors, for example, the telephone being more accurate than the telegraph. For them, this relationship needs to be understood “in Derridian terms, that the *supplement* – the ‘specific characteristics of material media’ – can never be ‘mere’ supplement; it is ‘a necessary constituent of [any] representation’ (2003, xiv).

In light of this, rather than defining today’s Polaroid practice in terms of an opposition to other practices, all of these practices should be thought of in relation to one another. This argument once again can be illuminated by Derrida’s notion of the *pharmakon* as both poison and cure. “Writing is both poison and cure, on the one hand a threat to the living presence of authentic (spoken) language, on the other an indispensable means for anyone who wants to record, transmit or somehow commemorate that presence” (Norris 1987, 38).

### **Opposition and Integration**

The stability and durability views of the digital file, built on the optimistic and sometimes outright messianic conceptions of “weightless bits” being more robust than “atoms”, as Negroponte believed, certainly did not consider the material infrastructure needed to secure the accessibility of digital, or that digitization was not “irrevocable and unstoppable” (Negroponte 1995, 4). The analogification processes that my interlocutors were involved with, then, corroborate the idea that the digital state of the object is only a transient one, and that it might again become analogue (as the transformation of digital-to-analogue confirms). This, however, does not suggest that analogue becomes the final form of the digital object, but that both analogue and digital are different instantiations of the photographic object which is in a constant state of mutability through remediation practices. Despite Maya’s concerns regarding the futility of the digital-to-analogue conversion processes, and considering them through the logic of supplementarity, proves to be a productive approach to the way digital and analogue media both work in opposition and integration, rather than cancelling each other out. This argument echoes David Sax’s findings regarding the analogue phenomenon,

“There is not a Luddite among them [analogue users]. They are incredibly forward thinking and innovative, and use every digital media tool at their disposal... They aren’t pushing the digital world away, rather, they’re pulling the analog one closer, and using its every advantage to succeed” (2016, xvii).

In other words, analogue, by being “automatic, chemical, inventive, in danger of extinction: qualities that are absent in digital materiality” (Martínez 2018, 6) infuses the digital image with a sense of ‘the real’, at the same time as securing it, by giving practitioners the chance to materialize (through a ‘backup’) their digital photographs. Simultaneously, digital techniques ease the cost and method associated with having completely analogue objects (as Martin explained), while also facilitating the dissemination of both the practice and the images – which intersect the digital realm once again when uploaded online. Once again, this view of analogue and digital as adding to what the other lacks echoes that of Derrida, who argued that “when Nature, as self-proximity, comes to be forbidden or interrupted, when speech fails to protect presence, writing becomes necessary” (1976, 144).

Even so, despite the integrative processes people engage with in relation to analogue and digital, there continues to be a tendency to depict film photography not only as the inverse of digital but as its opposition, where the analogue is often analysed through and reduced to an anti-digital rhetoric. Film practitioners are depicted as “turning their back on digital technology” in favour of “soulful” analogue media, as a piece in *The Observer* suggested (Stummer 2018), which not only equivocally antagonizes the analogue and the digital, alienating them, in Ralph’s words, but also restricts the possibility of thinking of them as integrative processes.

### **Conclusion: Pulling the Analogue and Digital Closer**

In the course of this chapter, I introduced the concept of analogification as a way to describe and address the digital-to-analogue output processes that I witnessed during my fieldwork. Analogification, however, rather than simply describing a physical instantiation of the digital object (as the suffix *ication* suggests), implies a specific way of approaching the digital object (or any object for that matter) as a process of constant transformation, always in a process of becoming. By exploring both the preservation and aesthetic reasons that drive digital-to-analogue conversions, it became apparent that both these drives are embedded in beliefs regarding photography’s claim of truth and its derealization due to digitisation, where analogification works as a way of reinstating the real. This, in turn, evidenced the cultural framework that surrounds digital media and the utopian and dystopian (Henning 1995, 219) perspectives that emerge from it, along with the paradoxical notions that digital objects are imbued with, that is, the belief that they are both strong and immortal, yet, at the same time, fragile and highly vulnerable.

While exploring different analogification practices it became clear that these not only meant a change in the medium in which the object (image or audio) was instantiated (for example, in the case of the German artist discussed previously), but also a transformation in how this digital object was perceived and experienced. These processes, thus, emphasized the mutable and transient nature of materiality, which, in the case of the digital object, challenged the messianic tropes of digitization as irrevocable and unstoppable, and suggested an understanding of the photographic object as “variable” (Manovich 2002, 36). Hence, the transformation of digital objects into analogue ones (which are then transformed into digital ones when uploaded to digital platforms) suggests that through these supplementary practices the analogue object, rather than being extinguished in the digital realm continues to expand in it. In this way, it is possible to see how, through these processes, practitioners learn to experience the unstable and potentially fragile digital object differently, in this case, as analogue outputs of their digital objects.

Furthermore, and contrary to Favero who argued that processes of analogization indicate that “this is no longer the age of digitization but that of analogization, of a process of increasing attention and production of material instances that is happening within (and not in opposition to) a digital habitat” (Favero 2016, 221), the supplementary relationship of Polaroid and the digital realm suggests that this is not so much an era of digitization or analogization, but an era of *-fication*, that is, of objects that become.

With this in mind, I finish this chapter’s discussion by presenting simply the answer Carlos gave to one of the questions that seem to hunt today’s Polaroid practice,

Me: “What is the future of Polaroid?”

Carlos: “In the future, we will have integrated ways to experience the digital with analogue”.

## CHAPTER FOUR: OBJECTS OF OBSOLESCENCE

### The resignification of Polaroid in the Digital Realm

When I met Mary in London during the summer of 2016, Bob Crowley's project to restart production of Type 55 instant film<sup>83</sup> had just announced that their third Kickstarter campaign<sup>84</sup> would be coming to an end, and the crowdsourced money was going to be returned (fig. 26). One of the reasons Crowley gave was the shortage of 'pods' (the name given to the package that contains the chemicals for photographic development), as well as the inability to continue to produce the film. This material shortage was not only affecting Crowley's new version of Polaroid's Type 55 film, *New 55*, but also other more stable and long-standing projects, such as John Reuter's 20x24 Studio<sup>85</sup>, which had been operating with film stock purchased from the Polaroid Corporation in 2009. Reuter, Executive Director of 20x24 Studio, who began working for Polaroid in 1978 stated about the scarcity of the product,

“Our original business plan was for five years with the inventory purchased and for a variety of reasons we have not worked through the material. Instant film will not last forever and despite storing the film stock in cold storage and mixing the chemical reagent only as needed the studio projects that they can maintain the quality for two more years” (“The Home of Large Format Instant Photography” n.d.).

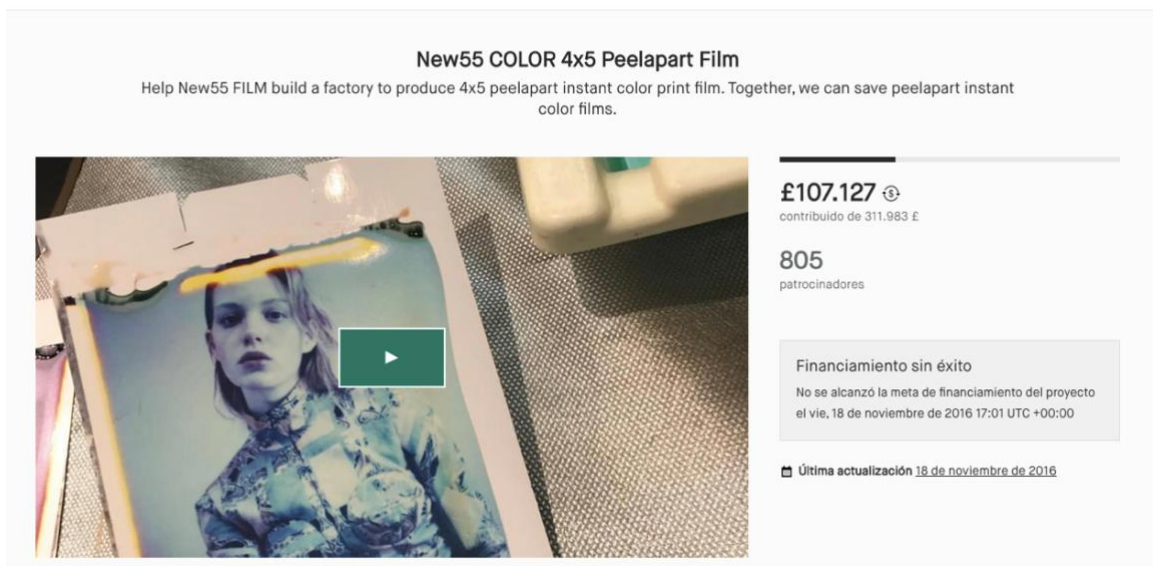
Following the news, that evening over drinks our discussion of Mary's passion for medium format instant photography inevitably gravitated towards Crowley's failed campaign, and what it implied for her practice. The conversation began with me following up on one of Mary's Facebook status updates in which she expressed her sadness over the last boxes of New 55 she had left, and how much she would miss the format. This discussion took us through different topics, such as her passion for Polaroid photography, her “beloved” medium format camera (4x5), and what the impending obsolescence of New 55 meant for her and the photographic scene as a whole. However, Mary's case was not an isolated one.

<sup>83</sup> Type 55 was a 4x5 (medium format) film format created by the Polaroid Corporation in 1961. It was the only Polaroid format that included a negative form of the picture, and it was mainly created for professional photographers who didn't like that Polaroid lacked a negative. With the bankruptcy of Polaroid Corporation, Type 55 film stop being produced.

<sup>84</sup> The first one successful, the second one, not so much.

<sup>85</sup> On John Reuter's Studio 20x24's website the following statement can be read: “The 20x24 Studio announced in June of 2016 that it will be ending production operations near the end of 2017.”

Just like New 55, at the moment of writing (and following Fujifilm’s cessation of production in 2016), my fridge holds four carefully wrapped packs of FP100C film that await to be used. With every shot I take, it becomes more evident that these might be the last ones. This is not only saddening on a personal level, or for other practitioners who are facing the same situation as me, such as Mary, but also for people who witness the camera being used. Several times during my fieldwork and photographic practice I have been in the situation of having to explain that the shots that I’m taking are some of the few left due to the lack of film stock and that soon my camera will go from being an active media to trash (or an unusable relic, depending on what happens to it afterwards). Unsurprisingly, obsolescence was something that most of the practitioners that I encountered during my fieldwork anxiously engaged with.



(Fig. 26) Bob Crowley’s Unsuccessful Kickstarter Campaign Screenshots

Understanding people’s reaction towards the obsolescence of certain media might not be easy if one has never experienced the loss of something dear, but as Casella Conlin and Woodward suggests, there is an undeniable link between material objects and the affective world, more specifically in that the encounter with the object world can be “deeply emotive” (2014, 103). This participation of objects in the creation of affective links (Ibid 108), in the case of Polaroid, can be seen in the capability of the photographic camera to evoke happiness, or promote happiness as it is passed around. Even so, as much as objects have

86 <https://www.kickstarter.com/projects/892575418/new55-color-4x5-peeland-film>

the capacity to affect us, eliciting happiness, their loss can be said to provoke deep grief (Martínez 2019, 10), as the case of Mary suggests.

Accordingly, this chapter focuses on the processes and construction of obsolescence and the active role practitioners take in resisting it. By drawing on Mary's heartbrokenness and other cases of Polaroid formats that are on the brink of obsolescence, I will explore the material and social consequences of obsolescence and the wider ideological framework of technological evolution and revenue in which they are embedded. I will argue that the continuous use and insistence on Polaroid practice, that is, the active decision not to discard (Kubler 1962, 71), demonstrates the way users can become agents of social change (Bijker 1995; Kline and Pinch 1996; Minniti 2016). This argument demonstrates the convoluted (and ideological) nature of planned obsolescence, its linear understanding of technology, as well as the reductionist view that technologies are simple containers waiting to be filled with meaning.

Finally, this chapter will end with an analysis of the relationship between obsolescence and nostalgia, and the way users' resistance to technological change and insistence on the practice is indicative of a critical attitude towards capitalism, its fast turnover, and the aesthetics of the 'new' (Dawdy 2016, 7). However, as will be shown, this critical approach is not exempt from contradictions due to nostalgia being easily co-opted through its commercialization – "retromania" (Reynolds 2011) – and subsequently stripped of its critical potential (Watkins 1993, 38; Henning 2007, 58). Finally, the last section will also address the paradox of today's Polaroid practice, that of obsolescence, in which practitioners' heartfelt feelings towards obsolescence is brought into question by their fascination with the scarcity and uniqueness of the media.

## **I. Facing Obsolescence. Two Case Studies of Affect.**

### **Mary and the Medium Format Polaroid**

"There is something about the way it looks [Polaroid 4x5], the conversation...I will miss it forever." These were Mary's words following the news that New 55 film was not going to be produced anymore. Mary's heartbrokenness was due not only to her inability to continue to shoot this particular Polaroid format, but also because of everything that the practice encompassed. For Mary, medium format instant photography was not only about what she considered to be a "beautiful format", but also the material and social relations that stemmed from the practice. When she started shooting, she recalled how one of the first things she

did was to go online to find a dedicated Facebook group she could join. There she met another member from the USA with whom she became friends, and who she would call whenever she had any troubles or doubts. Thus, for Mary, the Polaroid 4x5 format obsolescence also meant the obsolescence of the community.

Mary started shooting Polaroid instant film when The Impossible Project had already taken over the film production. One of her friends introduced her to the practice and, as she told me, it took her two packs of film (with only two successful shots) to captivate her. She is what in the Impossible Project scene is considered a *Pioneer* – The Impossible Project original supporters and testers of their first film batches – and as such she is very much aware of both the film changes, as well as the Company’s new direction<sup>87</sup> and management decisions, some of which she doesn’t support. She took issue, for example, with the lack of improvement on the latest film batches, due to what she felt was an excess focus on design rather than photographic improvement—seen in the Company’s coloured framed films and first camera incursion with the I-1 – and the lack of involvement with the community. Most of these issues, for her, have to do with a lack of expertise, something she terms as a “disconnection with their users and products,” an issue that has made her feel she is no longer “part of the Company.” In spite of her feelings, Mary is very much vocal about the need for companies like The Impossible Project and their responsibility for keeping, in her own words, “the practice alive”. For her, users that complain about the film quality show a clear lack of understanding about the effort instant film production requires.

“If you are expecting a perfect product, that won't happen. The Polaroid Corporation had decades of research in order to produce the film they did and were able to use chemicals that are banned today. So complaining about it is just pointless. No one is forcing them to buy it.”

Similarly, when people complained about the quality of other film formats, such as New 55 or other small-scale production projects, she was emphatic in declaring that doing so is to miss the whole point of these projects. For Mary, supporting a Kickstarter campaign implied a risk, one that she was more than willing to take to keep her “beloved media going”. Since she started shooting instant film, she has ‘backed up’ several crowdfunding campaigns, and she will continue to do so as long as she can. For her, these campaigns are the only chance of keeping these photographic practices alive right now. That said, when Bob Crowley

<sup>87</sup> By the time I met Mary, The Impossible Project had not transitioned into Polaroid Originals yet, but had already changed management, with Kaps no longer in charge of the Company.

announced in his third Kickstarter campaign that they were ceasing production due to inability to source chemical pods Mary was, in her own words, “devastated, I just wanted to cry.” With only three boxes left (on their way from the US), the possibility of these being her last shots have left her “heartbroken”. Learning to shoot medium format was not easy, she recalled. She had to learn how to operate the camera and handle the film, which meant that most of the pictures she took were completely blank or with no good results, however, she noted, “once you get the knack for it... you are hooked”, which is why she finds “devastating that she will never be going to be able to shoot it again.”

In spite of Mary’s strong feelings, she is realistic about the chances of New 55 (or other projects) continuing to be produced. The cost of hand-producing this specific type of film is extremely high, as the machines are not available anymore (which is why New 55 built their own machines) and the fact that these projects are almost always led by heart-driven people who believe in continuing the production of the formats, yet often lack the financial background and means to do it, Mary is sure these will be her last boxes (though she was relieved that at least her camera would not become obsolete as it was possible to use other types of film in it).

### **The FP100C Pack Film Global Community**

Mary’s feelings towards her Polaroid medium format practice becoming obsolete was not exclusive, and not foreign to me. I own a Polaroid 180 Land camera which relies on FP100C film to function. At the beginning of 2016, Fujifilm, the only manufacturer of FP100C pack film<sup>88</sup>, announced that they were stopping the production of the film despite it still being used by thousands of people globally. Following the announcement, and similar to the story of The Impossible Project, practitioners and users of the FP100C film gathered online, establishing the *Fujifilm; Save Fujifilm FP100C Instant Films* campaign on change.org to plead with Fujifilm to reconsider their decision (Fig. 27).

“Fujifilm has announced the discontinuation of FP100C, the very last peel-apart instant film available for Polaroid packfilm cameras and Polaroid backs. We want to keep on using our old Polaroid cameras and we are determined to avoid the discontinuation of this romantic kind of photography. We love to shoot with these

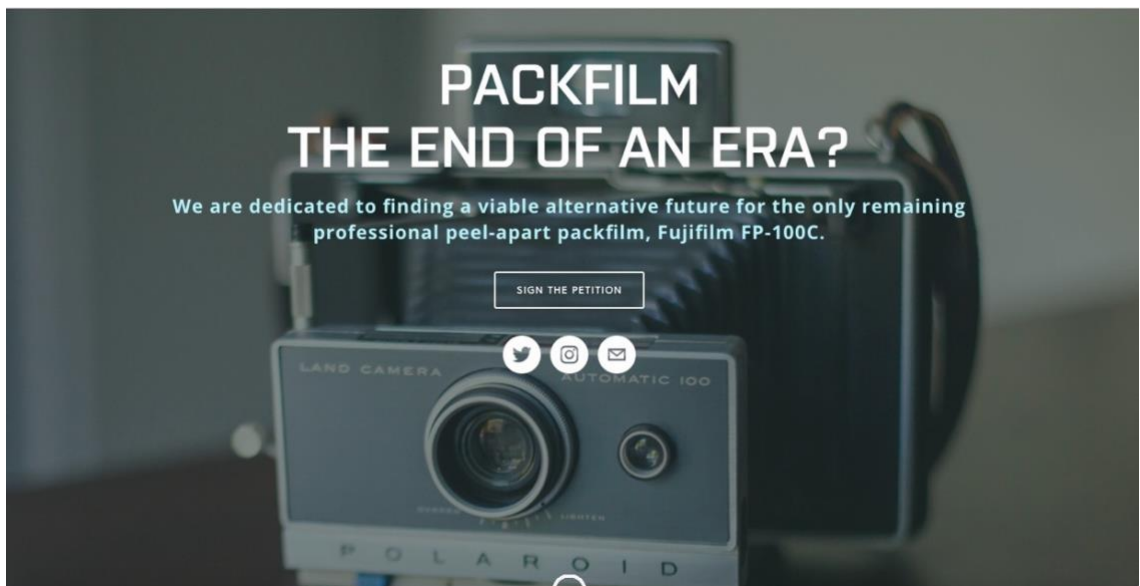
<sup>88</sup> Pack Film, also known as peel-apart film, was introduced by Polaroid Corporation in 1963 under the Type 100 rubric (Adam 2017, 22). Though later its production was picked up by Fujifilm, with the FP100C film being the only film available for Polaroid 100 series.



cameras and wait for the result, this is a kind of magic!

We ask to Fujifilm Corporation, Impossible Project and Lomography as well to save this product. Please, try to save it for us and for the entire world of photography. I'm sure that all subscribers will be grateful to you! :)”

The campaign circulated on social media, mainly Facebook analogue instant groups and other analogue photographic sites, and during its first couple of days gathered more than 25,000 signatures. Requesting analogue photographic companies, such as The Impossible Project and Lomography for help, the change.org campaign sought to secure the continuation of the film format so practitioners could continue to use their Polaroid cameras. However, and despite these efforts – which included Florian Kaps’ attempt to purchase the machines or establish a partnership with Fujifilm – the Japanese Company was not willing to step back.



*(Fig. 27) Save Pack Film Campaign Screenshots<sup>89</sup>*

Following the purchase of the last standing Polaroid factory and the creation of The Impossible Project (aided by savepolaroid.com and save-polaroid.com, and preceded by Kaps’ unsaleable.com) the failure to secure FP100C production highlighted the role digital platforms have in promoting and creating a collective endeavour, a situation that was not foreign to Kaps who has taken online crowdsourcing and funding as a serious outlet for

<sup>89</sup> <https://www.change.org/p/save-instant-film>

securing old media, and for which he has become the representative<sup>90</sup>. When I met Kaps and asked him about how he interpreted Fujifilm's refusal to continue with the FP100C film production, he explained he felt they weren't able to grasp the importance of the format and the extension of its usage. He told me,

“It's a big company who earn most of their money in other fields. They make cosmetics and other stuff. But, for sure, Instax is one successful division. I think I was just too late. I think the decisions had been taken long before I went there and long before they communicated it. So maybe I was too late. I never understood it, they never told me why. They just said no. They didn't say they didn't care, they were very friendly, but they said, ‘maybe you just have the wrong questions’”.

Kaps' failed negotiation with Fujifilm suggested the Japanese Company's inability to grasp the importance of the film format that, despite not being their best-selling product, was still being used globally (as the campaign showed). “The wrong questions”, as Kaps termed them, had to do with newer, and arguably ‘better’ technology availability (for example, their Fujifilm's instant camera, *Instax*<sup>91</sup>). The failure to secure the production of FP100C film illustrates the complexity of old media practices and the struggle to secure their continuation in a technology-driven society that constantly fails to acknowledge the social and material importance of the media in question to specific communities (Packard 1963; Sterne 2007). (Still, as the histories of analogue media have proven so far, nothing indicates that pack film has, in fact, reached its ending. For this, see Conclusion).

This situation is clear when we analyse the myriad of crowdsourcing projects that involve practitioners or users who enjoy certain film formats and take it upon themselves to secure their practices by crowdsourcing funds, material supplies, and no less importantly, knowledge and skills. During my fieldwork, I became aware of several crowdsourcing projects that were trying to ‘save’ film factories or other similar media technologies and infrastructures in order to secure the continuation of particular media practices. One such example was the Italian company, *Film Ferrania*. Created in 1923 in the region of Liguria, the

<sup>90</sup> Since The Impossible Project was created, Kaps has participated in several crowdsourcing campaigns, some of them his own projects, such as the Polaroid Pinhole Camera and the Instant Lab. Yet, he also has supported other people's projects: FP100C Pack Film and The Magic of Linotype: Save and Restart a Printing Legend.

<sup>91</sup> Instax is Fujifilm's own brand of instant cameras. They were launched into the Asian market in 1998, yet only entered the Western market during the 2000s following an agreement regarding the Polaroid Corporation's patents. Digital Encounters magazine reported in 2016 that by that's year fiscal term, Fujifilm's Instax had reported selling 5 million instant cameras as opposed to 1.4 million digital ones, with their biggest market in the U.S and Asia.

Company made 35 mm, 120 mm film, and cameras, mostly used in cinema by the likes of Fellini, De Sica, and Antonioni. Between 1964 and 1999 the Company belonged to 3M Company, however, after changing hands several times, in 2010 it stopped producing film (“A Brief History of Film Ferrania” n.d.). In 2012, two Italian film enthusiasts took it upon themselves to reactivate film production (foreseeing that the 35 mm film production from Kodak and Fujifilm wasn’t certain), and launched a Kickstarter campaign – *100 More Years of Analog Film* – which sought to purchase the manufacturing machinery of the original Company in order to downscale and reactivate film production. After a successful campaign, by summer of 2016 *Film Ferrania* was already dispatching supporters’ first ‘rewards’ (35 mm film rolls and their names engraved in the factory wall), achieved with the support of thousands of film enthusiasts, much like Mary, who strongly believe in the different projects that help secure ‘old’ media’s future.

### **Affect and Preservation**

Mary’s expression of love towards her 4x5 camera and her devastation towards the discontinuation of the film, was also seen in the wider community efforts to ‘save’ FP100C film. Although these reactions might appear excessive at first glance, they reveal the “strong affective power hidden in situations of repair and disrepair” (Martínez 2019, 10) and underpins the steps the community is then willing to take in order to challenge disruptions to their practice. The online campaigning and crowdfunding projects suggests that commodities are more than material containers of economically-driven processes and aesthetic symbols of exclusivity, but work as “material containers of social meaning” (Bartmanski and Woodward 2015, 17; see also Miller 1998), in which practitioners’ refusal to discard only proves the affective power of the artefact.

One such example was Lisa, who, upon seeing a Polaroid Spectra camera would literally voice, “I don’t know why but this camera just makes me happy.” Upon further enquiry, I learned that her grandfather was a photographer and used to have one of the cameras, which she later inherited. Lisa’s happiness upon the encounter with a Polaroid Spectra confirms that “objects not only embody good feelings, but are perceived as necessary for a good life” (S. Ahmed 2009, 34). Even so, even if Lisa’s happiness might be related to the camera’s inherited status (suggesting a logic similar to that of the gift (Mauss 2002), her excitement was expressed towards all Polaroid Spectra cameras, as opposed to only her inherited one, confirming that her affective relationship with the medium is not linked to reciprocity and

kinship (which was emphasized by her comment on not having a good relationship with his grandfather), but to its materiality.

In this scenario, both Mary and Lisa's cases deny the instrumentality of the photographic medium, and emphasize the intricate link between material and affective worlds, where the personal encounter between the subject and object: the processes of circulation and narratives of the camera (how it moves from gift to commodity, and back, see Appadurai 1986; Kopytoff 1986), along with its mediated, embodied aspects, enable the artefact to "be understood as a 'participant' in the creation of affective links. The camera helps to make an assembly of relations in which the qualities and capacities of each entity are relationally determined" (Woodward 2014, 107).

The consequences of the constant threats that haunt 'old' media artifacts due to processes of obsolescence, can be seen, for example, in an article written by a young photographer reacting to the discontinuation of FP100C film, *My Last Frames of Fuji FP-100C, or: The Creative Obligation Not to F\*\*\* it Up*.

"Shooting my last FP 100C was in some way a revelation to me: It made me realize that if we are unfortunate, our most cherished film emulsions will be silently killed off and that we for as long as we can enjoy shooting them, should shoot every frame as it could be the last. And even if it is only the little moment of joy you feel, when you have overcome a creative struggle, and in the end have produced an image worth looking at" (Hagelstein 2018).

Based on Steve McCurry's *The Last Roll of Kodachrome* documentary made for National Geographic in 2009, Hagelstein's piece evidences the affective disposition towards the media artefact, while also demonstrating the social implications of obsolescence and technological change. Similarly to Hagelstein, McCurry states the need to "make each one [of the 36 frames] special, all pictures have to count"; while both accounts highlight the nostalgic implications of film production coming to an end.

Alternatively, Steve's coping mechanism in the face of obsolescence consisted of visiting second-hand markets looking for old-looking Polaroid cameras (among other analogue ones) to take apart, clean, fix, and sell online (confirming that for him, at least, Polaroid camera are not inalienable goods; they can be exchanged and circulated as commodities). Moreover, he has spent the last months devising a way to convert Polaroid pack film cameras into integral film ones in order to save millions of cameras from becoming trash (echoing one of Kaps reasons behind The Impossible Project foundation). What these

cases suggest is that though “for many people, the default affective response to [the breakdown of] infrastructure might be apathy, disinterest, or indifference... it is also possible that a broad spectrum of infrastructure-related affects remains unspoken and unknown” (Parks and Starosielski 2015, 15) (see chapter 5).

## II. Contesting Obsolescence.

### The Construction of Rubbish<sup>92</sup>

The cultural regime of value in which media technologies are embedded has led to a situation in which new and old media are put in relation in order to produce obsolescence (see Introduction). This means that in spite of being operative, old media, through the process of field equivalence, which equates two media technologies until one of them is considered obsolete (Watkins 1993, 27), and remediation, where people are convinced the new media is an improved version of the older one (Bolter and Grusin 2000, 68), are made to look outmoded and ultimately, obsolete. In *New Lamps for Old* (2007) Michelle Henning argues that media obsolescence, as part of a material social practice and commodity culture, can only be understood through the analysis of the ideological frame in which the media are located. Henning discusses the case of digital and chemical (analogue) photography and the process in which “photography was not being outpaced or becoming obsolescent, it has to be made obsolete, and its obsolescence had to be presented as inevitable” (Henning 2007, 53, see also obsolescence of function in Packard 1963, 62). That is, for digital to replace chemical photography an equivalence needed to be introduced so that one media appeared as the obsolete version of the other (remediation). Thus, rather than being “a natural phenomenon” (Watkins 1993, 27), or related to qualities inherent in the media (Henning 2007, 55), it becomes apparent that obsolescence is, as the notion of innovation and progress suggests, an ideological production that forces or engineers either through stylistic or technological processes<sup>93</sup> (Sterne 2007, 22) “inculcat[ing] anxiety into the consumer” (Maycroft 2009, 14; Packard 1963, 71).

Discussing the ideological framework that produces technological obsolescence, Michael Thompson observes the process by which transient objects transfer into durable

<sup>92</sup> In this section I draw on concepts used by the Social Construction of Technology: Construction, reactivation, and stabilization, in order to draw attention to the progress-based ideology that drives technology. By using them I intent to suggest that these are not as ‘fixed’ as the discipline believes, but can be reverted through the hybrid zone of technical practice (Pinney 2010, 167).

<sup>93</sup> Stylistic obsolescence refers to when one artefact is redesigned in order to make the previous one look ‘old’ or out of fashion. Technological obsolescence refers to when an artefact is replaced by a more ‘advanced’ version. For a more extended analysis of different types of obsolescence, see Neil Maycroft (2009).

ones, noting that there is a covert third category, that of rubbish, through which transient objects need to go before becoming durable. According to Thompson, the common belief is that once a transient object loses value it become dust, however, as he aptly notes, it “continue[s] to exist in a timeless valueless limbo where at some later date...it has a chance of being discovered” (M. Thompson 2017, 27). Rediscovery, then, brings back rubbish, that is, cheap artefacts that were never intended to become durable, and recirculates them once more. This time, however, “their ownership is transferred from rag-to-bone man to the knowledgeable collector” (Ibid 60). What is of interest in Thompson’s rubbish theory in light of today’s Polaroid practice is the transformation of transient to rubbish through processes of dilapidation, obsolescence and changes in fashion, and how he considers “the march of technical evolution [to be] irreversible and linear” (Ibid 53). Thompson’s premise of the irreversible nature of technical evolution, however, becomes more complex when following George Kubler’s argument concerning discarding (and the potentials of looking at these discarded objects from a multi-temporal perspective).

“The usual view in our age is that obsolescence is merely an economic phenomenon occasioned by technical advances and by pricing. The cost of the maintenance of old equipment outruns the cost of its replacement with new and more efficient items. The incompleteness of this view is apparent when we consider the *decision not to discard*” (emphasis added) (Kubler 1962, 71).

Kubler’s point regarding the incomplete view of progress (as irreversible) was confirmed by Alex, a photographic studio owner based in West London, with a strong opinion about technological progress.

“Yeah, it’s a theory [obsolescence]. [It] states that] when something new arrives, people just shove their previous things in the trash. But it is obviously not like that. There are things around us that have been there for ages and people continue to use them. Nothing really becomes obsolete. When I thought of the year 2017, I thought we would be walking on jets, but it actually looks the same. You go to some bits of England and everything is like it used to be.”

Here, the decision not to discard and Alex’s opinion complicates the dominant narrative of media technologies disappearing in the face of newer ones, and the fact that capitalist societies base their profit and circulation in tropes of progress (Packard 1963, 122). These

factors challenge Thompson's concept of irreversibility, and propose instead that "any historical period must therefore be imagined as a mixture of events which emerge at different moments of their own times" (Kracauer 1966, 68) (for an extended analysis on this argument, see chapter 6).

The continuation of Polaroid practice suggests that rather than technologies moving forward and replacing the old, old technologies persist in the form of rubbish and continue to be used despite capitalists' intention to make them obsolete. At the same time, the continuation of Polaroid also proves the material and social impact that photographic practices have for practitioners that extend the realm of the photographic into the affective. Hence, when people decide not to discard, old media practices are actively circulated and produced, and rather than reappearing as durables (as part of someone's antique collection as Thompson suggests) they can intersect current photographic practices once again.

This is the case of most of the media technologies that I have discussed so far and defined as the new old, and was also expressed by Alex in the following way,

"I believe Polaroid is a good way to think about it. It's a classic example of something which has got new value because people are looking at it with new eyes. Is not doing the same job it used to do because is not required for what it was required before. But people have got a new sensibility, and a new attachment to it, which is very interesting. So, if Type 55 and all the other brands are still there, they'll be consumed now by new people for different reasons."

Alex's words, in this context, demonstrate that "social and cultural change is uneven, with elements of the new coexisting with older forms and practices" (Henning 2007, 53). This can be seen both in the analogification and digitization processes discussed so far, and the recurrence of old practices in relation to newer ones.

### **The Reactivation of Rubbish**

The transfer from transient to durable artefacts describes a process in which "boundaries between rubbish and non-rubbish move in response to social pressure" (Thompson 2017, 28), and in which transient artefacts are brought back as durables in the form of collectables. However, despite the potentiality of an afterlife for transient artifacts described in the cultural and social process of rubbish, Thompson's rubbish theory fails to acknowledge the active choice not to discard expressed by Kubler. Practitioners unwillingness to discard their

cameras and their active participation to secure film production through crowdfunding campaigns and upcycling challenges the belief that rubbish can only come back in the form of passive collectables, whose aim is to serve as objects of mantelpieces. This reality instead suggests that rubbish can remain and linger as residual media – “artifacts that occupy space in storage house are shipped to other parts of the world, are converted for other uses, accumulated in landfills, and relate to increasingly arcane skills” (Acland 2007, xv) – “becom[ing] an essential part of secondary markets, from garage sales to antique collectibles, altering both commercial and semiotic value” (Ibid). It is in this context then, that Polaroid becomes part of a wider material and social environment, contrary to technological narratives that promote a linear vision of progress with no potential turning back (Bijker 1995; 2009) and where new replaces the old, indicating that the past can actively participate in the present and future of media technologies. This comes to demonstrate that obsolescence processes, rather than being about the material failure of the artefact (although this can happen<sup>94</sup>), are mostly materially and socially constructed, and practitioners and media, through different forms of resistance, can take an active stance towards forced or engineered obsolescence processes.

In his work on Polaroid practitioners (*polaroiders*) in Italy, Sergio Minniti describes practitioners’ reaction towards the cessation of film production as a “process of opposition to mainstream technologies,” in which the online campaigns deployed to overturn the film discontinuation enabled the possibility of users to become “agents of social change” (Minniti 2016, 25; see also Kline and Pinch 1996). Ronald Kline and Trevor Pinch, writing about the development of the automobile in rural America (1996), noted that users, in the form of “relevant social groups”, are as important as the technical side of the artefact (Bijker 1995, 47). Kline and Pinch’s argument goes against the technologically deterministic perspective that considers technology as autonomous of society (and therefore, the political, social, and cultural aspects of it) and, more importantly, users as passive agents. And through the analysis of different socio-technical developments they argue that users actively participate in the construction of technology, becoming agents of social change (1996, 764). By following Minniti and Kline and Pinch’s attention to users as agents, I do not intend to suggest that technology is socially constructed<sup>95</sup> or to go back into either form of determinism or

<sup>94</sup> Neil Maycroft argues that there are various techniques in planned obsolescence which can be grouped into three categories: technical, stylistic, and ‘superfluous within the necessary’. According to him, technical obsolescence corresponds to calculated or predicted failure of parts; stylistic to the premature redundancy; while in ‘superfluous within the necessary’ creates an obligation to consume related products (2009, 10).

<sup>95</sup> SCOT (Social Construction of Technology) is a subfield of Science and Technologies Studies often attributed to Wiebe E. Bijker and Trevor Pinch. SCOT is considered to “offer a reconciliation of the previously opposite



purification (see Introduction), but to draw attention to processes as opposed to finished artefacts, and the way technology and society are intertwined and mutually affect each other. This framework will help understand Polaroid practitioners' reaction towards technological obsolescence and up to what extent they can actively affect (and potentially, shift) the direction technologies are heading.

Hence, the purchase of the last Polaroid factory located in Enschede and the subsequent creation of The Impossible Project, following an online worldwide campaign. The case of Rhiannon, who as soon as she heard Polaroid Corporation was discontinuing film production went into her local store to stock up on film in order to secure her practice, and later set up the [save-polaroid.com](http://save-polaroid.com) website. And Mary, with her financial and vocal support of different crowdfunding campaigns and projects that seek to secure the continuation of different film formats, all evidence people's active role in the face of obsolescence. According to this, the refusal to discard, online crowdsourcing campaigns, offline cooperation, upcycling practices, among others, stand as a global response, a "technological resistance" – "processes of opposition to mainstream technologies" (Minniti 2016, 25) – towards planned obsolescence and the replacement of technology. Rather than being against the technology – as in the case of cars in urban America (Kline and Pinch 1996) or mainstream photographic technologies, as Minniti suggests – this resistance is linked to a "relevant social groups", that is, Polaroid practitioners' desire to continue to use their cameras after the market has determined they are obsolete, and on a broader sense towards, the idea of technological progress (see chapter 6)

### **The Stabilization of Rubbish**

In January 2017 *The Guardian* reported that during the previous year vinyl record sales in the UK had "outstripped that spent in digital downloads" (Ellis-Petersen 2017). On a similar note, the online photographic media outlet, *PetaPixel*, announced in May 2017 that "Polaroid's brand and intellectual property has been acquired by the largest shareholder of The Impossible Project", with "a huge range of Polaroid products being sold in over 100,000 retail stores in over 100 countries around the world" (Zhang 2017). This acquisition, which led to the change in the company's name from The Impossible Project to Polaroid Originals,

social constructivist and technological deterministic views" (Bijker 2009, 70) of technical development by establishing the co-production of technology and society. Even so, in the last decades SCOT has been criticized due to its inability to focus on the consequences of technology and their dismissal of marginal groups which they do not consider among the relevant ones (see Winner 1993).

marked an important shift from what could be considered a niche practice to a mainstream one (as seen in the chosen selling outlets, for example), expressed clearly in the adoption of the original Corporation's name and the following worldwide reach. This shift from The Impossible Project to Polaroid Originals indicated shareholders' intention to establish Polaroid practice as an alternative to other mainstream photographic ones (35 mm, Fuji Instax, digital), an issue that was made evident with the shift they made in their chosen retail channels, from small concept stores (Lisbon, Paris, London, Berlin), The Impossible Project website, and alternatively, eBay and secondary markets; to major mainstream retailers, such as Argos, Best Buy, Urban Outfitters, and Asos<sup>96</sup>. In this scenario, the shift from small concept stores to major retailers not only signalled an intention from Polaroid Originals to captivate the attention of a wider audience (not necessarily only those inclined towards analogue photographic practices) but also the capacity of the Company to satisfy worldwide demand of their products. This capacity of an 'obsolete' media to come back into those retail channels indicates that in spite of SCOT's understanding of technological stabilization and closure processes – in which “results in one artefact – that is, one meaning as attributed by one social group – becoming dominant across all relevant social groups” (Bijker 1995, 271), and “no further design modifications occur, and the artefact stabilizes in its final form” (Klein and Kleinman 2002, 30) – technological artefacts continue to mutate and incorporate new materials and values<sup>97</sup>.

John Davis, in exploring vinylphiles, “a diehard group of vinyl fans, unwilling to abandon the now-obsolete medium” (2007, 225), diagnosed at the time of publication that the vinyl medium was obsolete. However, as *The Guardian* article (Ellis-Petersen 2017) suggests, the sales of vinyl during 2016 exceeded those of digital music. This contradiction evidences that despite Davis' belief that vinyl is an obsolete technology, ten years later it continues to intersect both musical practices and the mainstream market. A similar diagnosis was also made by Polaroid researcher, Peter Buse in 2007, who noted that Polaroid was approaching extinction. David's argument is of particular interest for the analysis of Polaroid practice continuation for two main reasons: (1) It acknowledges that “residues of the past social arrangements and relationships... continue in the present” (Watkins 1993, 53), confirming that media artefacts are not static but in flux. (2) It recognizes the ideological construction of obsolescence and that it is not necessarily linked to technical aspects of the

<sup>96</sup> Throughout my research, I have used the 'high street' as marker to measure the stabilization (Bijker 1995) of Polaroid practice. The mentioning of these stores is, thus, intended to depict how Polaroid went from niche photography (The Impossible Project) to mainstream practice (Polaroid Originals).

<sup>97</sup> The Financial Times noted in an article written in April 2016 that The Impossible Project sold a million packs of film during 2015.

media, but a broader ideological framework of progress driven by consumption (Packard 1963, 58).

With this in mind, the case of Polaroid and vinyl demonstrate that stabilization and closure processes proposed by SCOT are equivocal, as they do not acknowledge the possibility of the object to ‘destabilize’ and become stable once again. Still, the concept of stabilization remains useful for understanding the reversibility of technological obsolescence by the stabilization of the so-called obsolete (though not closure, as the future remains uncertain). In this sense, as Watkins suggests, “obsolete technologies don’t disappear as they become obsolete. Obsolescence means the possibility of *appearance*” (emphasis added) (Watkins 1993, 26).

### III. The Value of Polaroid

Following the discussion regarding the continuation of obsolete practices and the way in which practitioners’ affective links to the artefact motivates diverse actions that ultimately seek to resist planned obsolescence, this section will focus on the concept of nostalgia and fetishism – both evidently present in Hagelstein’s piece, *My Last Frames of Fuji*, analysed in the first section of this chapter – in order to explore the cultural framework in which artefacts’ affectivity and continuation unfolds.

A quick examination of Polaroid, 35 mm photography or vinyl record representation in the media immediately throws up the concept of nostalgia—“the name we commonly give to a bittersweet longing for former time and spaces” (Niemeyer 2014, 1) – as the common denominator to so-called obsolete or analogue practices. This can be seen in *The Guardian*’s diagnosing of younger analogue media users turning their backs on digital technologies (chapter 3), or in a piece published by the same media, *Why Do Millennials Insist on Living in the Past?* which depicts Polaroid among other ‘nostalgic’ practices as a “lack of imagination on the part of my own cohort, and a preoccupation with the lives of previous generations that might be inhibiting innovation” (Cosslett 2017). In both these examples, there is a clear depiction of Polaroid use as nostalgia, which in turn corresponds to a form of restoration of the past through a rejection of the present or future; practitioners are depicted as obsessed with previous eras. However, as the previous chapters of this thesis have demonstrated, the so-called analogue ‘revival’ does not stand against digital media, but the use of Polaroid is interdependent and integrated into the digital realm. Yet, it is also hard to deny the role that nostalgia does play in the continuation of these analogue practices. This ambiguity of the

role of nostalgia, then, demands an exploration of the concept, as well as its relationship with analogue media.

## **Nostalgia**

The concept of nostalgia was first addressed by Johannes Hofer in 1688 to describe a pathological disease that signalled “grief and obsession with a return to the place of origin” (Boym 2001b; Boyer 2006; Angé and Berliner 2014). Today, however, Niemeyer suggests it “has to be understood in the larger critical context of historical, social, political, economic and aesthetic considerations” (2014, 6). In observing nostalgia, Svetlana Boym identified nostalgia as a modern condition, offering two “tentative typologies”: restorative and reflective<sup>98</sup>. Restorative nostalgia seeks to reconstruct the lost home that is seen as the place of truth and tradition, while reflective nostalgia it’s about longing itself, longing for a home that might have never existed. In these terms, restorative nostalgia is often identified as a conservative stance towards the present, seen in Cosslet’s judgmental analysis for example, while reflective nostalgia corresponds to a critical attitude towards the irreversibility of time (Boym 2001b, xvii). Boym’s critical attitude towards “the time of history and progress” (Ibid) is productive for understanding the relationship Polaroid practitioners establish with the practice and the value they attach to it. A stance contrary to Angé and Berliner who argued that “materialities mediate people’s relationship with their past and, often, they trigger powerful mnemonic responses” (2014, 8), and one that demonstrates that medias’ materiality is not a mediator of nostalgia, but can actually produce it.

## **The Anti-Perfection Drive**

When I asked Leo, Supersense’s master record cutter and audio expert (previously introduced in chapter 3), about what drew him to analogue media, and why he felt people were so drawn to them, he told me,

“Maybe analogue photography [revival] is a response to the extreme investment digital technologies are. If you don’t have money or time to learn how to operate the digital, you can just go to the other end [analogue] and be less worried about

<sup>98</sup> Svetlana Boym is not the first scholar to define different types of nostalgia. David Berliner identifies exo-nostalgia and endo-nostalgia (2014), while Dominic Boyer, describes the heteroglossic nature of the term (2006).

imperfections.”

On a similar tone, also noting perfection, though here termed as ‘cleanliness’, Ralph told me.

“Sometimes you go [to a movie] and everything is so clean. I hate the term, but sometimes you want something more raw, edgy... whatever you want to call it. And I’m one of those people who does not want to fiddle around with digital [photo editing] ...I have my vision, I don’t need to do anything [editing] to the film.”

Ralph’s perception of digital as being ‘clean’ further resonates artist Tacita Dean’s argument about what for her defines digital film today: “‘Fix it in post’ is the song of digital. It has been the great advance in image-making in recent years, but it has also created an inert visual tidiness and uniformity” (Dean 2012, 20).

Accordingly, what Leo and Ralph’s accounts suggest, contrary to the widespread belief that the continued use of Polaroid or vinyl records correspond to a western nostalgic craze or “retromania” (Angé and Berliner 2015, 3), is that the imperfections generated by the materiality of the analogue function as a way of distancing themselves from the so-called ‘digital perfection’ they feel digital technology, and the media, promote. Through processes of post-production and editing the high resolution image (which Ralph termed as ‘clean’) “looks more brilliant and impressive, more mimetic and magic, more scary and seductive than a poor one” (Steyerl 2009, 3), but also less approachable and ‘real’ (see chapter 2 and 3). In this context, Hito Steyerl’s distinction between high and poor definition digital images (though for her restricted to digital images) can be appropriated in order to frame my interlocutors’ reactions to ‘digital perfection.’ However, the perfection of the digital image through post-production processes, rather than factual, has to do with the promotion of perfection, and to which the practice of analogue technologies stand as an alternative. As a result, the ‘errors’ or ‘rawness’ with which the analogue is linked, what Sterne defines as “bootleg aesthetics”, signals both intimacy (Sterne 2015, 33), and a way to critically engage with perfection, reclaiming it back into everyday life. Moreover, the emphasis on the process of making the image confirms that “it is not quality which [imperfect cinema] seeks in an artist’s work”, that is, the results, “but to denounce and propose” (Espinosa 1983, 32) an alternative to perfection. However, it is this emphasis on the process as opposed to the results that differentiates Polaroid practitioners from craftsmen (Sennett 2008). And, although in the practice of Polaroid there is attention to the role of the community, flexibility towards materiality and pride in one’s work, as Sennett argues in the case of the craftsman, the

insistence on the process and the experience that comes from it is (as opposed to a means to an end), along with an attentiveness for imperfections is what marks the craftsman from the Polaroid practitioner apart.

Consequently, the reclaiming of imperfection through Polaroid's 'poor aesthetics', rather than a restorative nostalgia, that is, to go back to a pre-digital age, indicates a "critical nostalgia" – "one way to refute capitalism and its temporality is to reject the accompanying aesthetic of 'the new'" (Dawdy 2016, 7), and where the 'new' is represented both by digital's perfection potential (through post-production) and the constant pushing of 'newer', 'better' media technologies (Packard 1963). Accordingly, Polaroid practitioners' unwillingness to discard their cameras for newer ones, along with their insistence in securing the practice corresponds to a way of navigating contemporary photographic practices "through alternative circuits of value and morals" (Dawdy 2016, 7).

During that same conversation with Ralph, he also elaborated on how the practice of Polaroid enabled him to 'slow down' and distance himself from what he termed the 'digital fatigue'.

"That's the problem with too much choice, that is the problem with throwaway. I think in a certain way it comes back to photography. Digital photography sometimes feels so throwaway, but when you print it out, it's different. [This] made people realised they needed to slow down. Just because you can fill in a whole 60 GB memory card doesn't mean you're going to shoot 500 films."

Ralph's account depicts the way Polaroid actively alters his photographic practice by enabling him to 'slow down' and counteract the 'price of mechanization', that is, the "speed of technology" (Sennett 2008, 110) that sees media technologies (and to an extension, life) as an unstoppable succession with a subsequent loss of content (Virilio 2007, 10)<sup>99</sup>. In that respect, the relationship between nostalgia and Polaroid, rather than being about restoring the past by rejecting digital photography – or about 'primitivism' (L. Marx 1987, 39) – point to a critical engagement with the "accelerism" of modern life (Angé & Berliner 2014, 2), the uncomfortable blind faith in technological progress (L. Marx 1987; Buck-Morss 1991, 79), and its subsequent emphasis on perfection, expenditure, and waste (Sennett 2008, 110). This suggests that the critical stance towards modernity, rather than following the path of nineteenth century reactionaries who decided that "the most radical way to contest

<sup>99</sup> For more information on the consequences of the speed of technology see Paul Virilio on dromology (2007).

machinery seemed, to some, to turn one's back to modernity itself" (Ibid 145), came within technology itself.

This last argument is relevant in the case of Tory, whose project, *Film is Not Dead*, forms part of a wider social responsibility towards keeping old technologies going by processes of fixing, upcycling, and educating the public about them via her stall and blog.

"We wanted to help people, we wanted to be physically there [at the market] in order to show people how to use the cameras, and also to make the point on how film is not dead... Actually, people are still interested in film and film is still around."

Tory's account demonstrates that in the continued use and emergence of analogue photographic practices, the "encounter with the old corresponds to a disruption of the everyday life, allowing a glimpse of other possible realities" (Henning 2007, 61). Hence, the critical attitude that my interlocutors took against digital 'perfection potential' and throwaway mentality indicates that Polaroid, rather than "a mere looking back" (Cosslett 2017), can, in fact, display a critical potential. With this, I do not intend to suggest that Polaroid cannot be co-opted by a nostalgia industry, in which dominant cultures seize residual practices by "nostalgic reproduction or through being marketed as 'alternative' culture", as Henning suggests in relation to LOMO (2007, 58; Watkins 1993, 26), but that old media practices, through practitioners' insistence, inhabit a fragile liminal space between the residual and the (nostalgic) industry, and it is at the liminal space in which their true critical potential can be exploited. This, as Boym noted, reminds us that

"Nostalgia can be a poetic creation, an individual mechanism of survival, a countercultural practice, a poison, and a cure. It is up to us to take responsibility for our nostalgia and not let others 'prefabricate' it for us" (N.d.).

### **The Antique Fetish**

The shift from niche to mainstream markets, seen in the current stabilization of Polaroid practice, complicates the radical potential of 'old' media, at the same time it has made many of my interlocutors feel ambivalent towards the practice. As Mary expressed in the first section of this chapter (albeit echoed by many), lately she has felt "disenchanted" with the practice, and "left out" of the community, particularly because what she feels is the brand's

new direction (seen mainly in the new retail channels and social media marketing campaigns<sup>100</sup>), that rather than focusing on the material and experimental potential of the camera, focuses on the communicative and social role of photography (Miller 2015, 8).

The recent loss of interest in Polaroid in the context of it becoming more easily available and targeting younger audiences offers a stimulating point of discussion regarding what can be considered the ‘epic narratives’ of technological resistance (the ‘saving’ of the practice) and how technologies may become less interesting once they are no longer in danger. Telling of this is the fact that many of my Polaroid interlocutors recalled becoming interested in Polaroid once they heard film production was stopping or becoming harder to come across. David, a long-term Polaroid practitioner expressed this in the following way,

“[Polaroid] is something I’ve always used, but I picked it up more strongly 10 to 15 years ago, just when Polaroid stopped making the film and it was getting harder to find it. Surely, I was paradoxically influenced by the fact that Polaroid was stopping. I don’t know whether it is stubbornness or because when something is rare or harder to find the interest is bigger.”

On a similar note to David, one day while I was assisting Elisa in the operation of the 20x24 Polaroid camera, I met Pablo, a UK academic who flew over to Vienna with his family (mother, wife, and two children) to have his family portrait taken with the 20x24 Polaroid camera. When I asked him what had made him take this trip he explained that he was a Polaroid practitioner himself and when he heard about the 20x24 camera and its limited stock, having a picture taken with it “would give testimony of a moment in the history of photography.” Furthermore, when I asked him how he felt about the camera becoming obsolete due to the shortage of pods<sup>101</sup> (fig. 28), he clarified, “the camera is ephemeral. Just as human beings, they will die. But this is part of the attraction.”

<sup>100</sup> When Polaroid practice depended on The Impossible Project, their social media image was mostly experimental and artistic, inviting practitioners to submit their work and exploiting the unexpected nature of the film. With the change in the Company’s name to Polaroid Originals and the subsequent changes in investment and management, today Polaroid Originals’ social media campaigns centre on the fun and social aspect of Polaroid, often commissioning pictures from famous social media *influencers*. This can be interpreted as Polaroid Originals trying to reach a much younger audience (as opposed to The Impossible Project who relied on old-time practitioners or analogue photographic enthusiasts). Subsequently, the change in the corporate image of the brand has led to many of my interlocutors feel ‘left out’ of the practice and the community.

<sup>101</sup> The 20x24 camera relies on limited Polaroid Corporation supplies which are running out. Upon my arrival at Supersense, Elisa showed me the remaining expired pods (many of them leaking chemicals due to long-time expiration), explaining that there were only a few colour shots left.





(Fig. 28) Expired 20x24 Pods

Moreover, when I took the question of the rareness of Polaroid to my London interlocutors during a Polawalk, there was no agreement among them as to why rareness was considered a quality. None of them was willing to accept they enjoyed the rare status of the practice. Actually, they were quick to point out the positive outcomes of Polaroid intersecting the mass market and becoming more widespread, mainly in securing film availability and the stability of the practice. Only a few timidly admitted that now that it was more widespread (and though grateful about film availability) in a way it had ‘lost’ something, though not to the extent they decided not to use it. Although this might suggest an underlying grievance, similar to the one expressed by Levi Strauss in *Tristes Tropiques* upon discovering the ills of Western civilization (1995, 38; Pinney 2011, 98), instead has more to do with what Brian Larkin noted in relation to technologies’ first appearance, where the “production of the sublime feelings works well in their moments of introduction when their technical properties are being established and their meanings still in flux. But soon the excitement, fear, and uncertainty diminish as the spectacular fades into everyday” (Larkin 2008, 62).

With Larkin’s argument in mind, my interlocutors accounts could indeed be interpreted through a romantic lens where the sole interest is “with things ruined, decayed, derelict”

(DeSilvey 2017, 17; see also Dillon 2011), however, this contradiction (or even paradox) rather points to a more complex relation between technologies of the past and the way they intersect our present, and future. The answer to this paradox may lie in Shannon Dawdy's analysis of the fetish<sup>102</sup>, which is useful to understand the relationship practitioners establish with (old) media artifacts. According to Dawdy, the "antique fetish" corresponds to "meaningful objects that circulate in an alternative circuit of value. They have effects on their human handlers and help constitute a field of social relations" (2016, 139), which in the case of Polaroid occurred with the continuation of the practice through campaigning and resisting obsolescence, all acting as vehicles of narratives (Ibid 138). Also in relation to narratives, Caitlin DeSilvey argues in her study of conservation and cultural heritage that,

"The act of 'saving' implicates us, as individuals, in the biography of an artifact – or, as some have suggested, we save things not 'because they are value, but rather they are valued because they are being saved'" (2017, 13).

In this sense, Pablo's trip to Vienna to have his family portrait taken informs us of his desire to be included in the history of the camera and the epic narrative of Polaroid. This implication of people in the history of the artefacts take us back to affect and the way the artefact, through processes of narration and circulation (Appadurai 1986; Kopytoff 1986) is bestowed with an aura of pastness, in which the outmoded or obsolete artefact allows practitioners to catch a glimpse of other possible worlds (Henning 2007, 58), a "heterotopia of another time" (Dawdy 2016, 18).

However, as it was stated above with the case of nostalgia, the capacity of the artefact to unfold possibilities is diminished when it is removed from the liminal (critical) space it inhabits, a situation I constantly witnessed during my research. As soon as The Impossible Project changed into Polaroid Originals, many of The Impossible Project products started to be sold both in Facebook groups and eBay at exorbitant prices. This, however, was openly rejected by the Polaroid online community who were able to distinguish between the powerful character of the antique and its co-optation through 'fake' discourses of nostalgia. One such example was when a member of the Facebook group reposted an eBay link of a

<sup>102</sup> In her analysis of the fetish, Dawdy identifies three branches of the fetish theory. (1) The magic-religious object. (2) The Marxist commodity fetishism. (3) And Freud's Sexual fetishism. However, she recognizes that all of these three categories are based on the 'irrational' nature of the fetish. As an alternative, she offers the concept of the *antique fetish* to address the role of the fetish in the constitution of social relations. Following this, she establishes that the antique fetish needs to come from the trauma from a specific event, have irreducible materiality, and be socially recursive (2016, 139).

duo-chrome pack<sup>103</sup> of a film being offered for £699.00. The post was met first with disbelief, and later with banter, with most users choosing to laugh it off as seller's madness (and the potential buyer's stupidity).

As a result, rather than holding a fascination with everything rare, Polaroid practitioners are affectively drawn into the epic and individual narratives of the artifacts production and circulation, and the way their resisting actions – protesting, crowdsourcing, and upcycling – implicates them with Polaroid both as a practice and a community, and as Pablo suggested, in the broader history of photography.

### **Conclusion: Polaroid's Future**

Through the course of this chapter, I have focused on some case studies in order to address ideologically-constructed processes of obsolescence and the effect this has on the continuation of Polaroid practice. I have explored the affective link my interlocutors establish with the practice, a link strong enough to drive them to engage in resisting actions that seek to secure the practice. This myriad of actions, which resulted in Polaroid continuation, in turn, has demonstrated the reversible nature of obsolescence processes convoluting “the clean, orderly narrative of technological progress” (Sax 2016, xv). The possibility of Polaroid to intersect mainstream photographic practices once again and stabilize, thus, indicates that the continuation or ‘revival’ of old media practices are part of a wider cultural framework in which Polaroid, through its materiality, enables a critical approach to the present. Through the Polaroid case it is also possible to understand that the continuation of so-called obsolete practices is not so much about keeping every media artefact from the past, but those which practitioners feel still have a place in the present and future of photography. This refutes the notion that old media practice continuations are about restoring the past (and rejecting the present), while it confirms that longing and critical thinking are not opposed (Boym 2001a). Related to this, I return to a conversation I had with Elisa about the 20x24 Polaroid camera and its impending obsolescence in order to shed light, once again, on the integrative character of analogue and digital.

“I have positive thinking. For me, there is always a way to continue. There are some ideas and some projects to keep it alive, so, I'll never give up. For me, it's more about

<sup>103</sup> Duo-chrome film stands for two-colour film and was produced by The Impossible Project in a range of colours. This was discontinued after the change to Polaroid Originals. The original price of the film was of £18.99.

using it and having fun, at the same time I hope that people are looking for a solution. The situation has changed to the positive so much since we started the factory [The Impossible Project], now there are many companies out there, and even Impossible agreed that they might be able to turn black and white integral material into 20x24 size. So, I'm very positive about it. *Maybe this is the end of an era but not the end of the material.*"

For Elisa, the scarce chemical resources that are restricting the practice are not necessarily negative, but the start of something different and no less exciting. Her attitude towards the materials running out, then, demonstrates that the nostalgia some practitioners experience with Polaroid is not about having the same (old) media, but about the capability to continue to use it in the present, and secure its future. Furthermore, Elisa's argument resonated with Kaps' perspective about how the future of analogue media should be secured.

"It is my role to try to find them (technologies, factories) before they collapse, and reconnect them with today's world. My dream is always that some big investor is going to come and give me 1 million to keep something alive, then it would be so much easier. There are people who can do it, but at the moment it is very difficult. And I want an investor because *I don't want to do something that doesn't have an impact, I don't want to keep something alive that doesn't have the chance to walk on their own.* I would prefer an investor to a philanthropist."

For Kaps then, the drive to find and 'save' old media is not so much about securing the continuation of all media technologies for the sake of it, let alone a rejection of the digital (as the nostalgia industry narratives propose), rather he aims to save only the ones that, in his own words, have an impact and can walk on their own. Accordingly, it is arguable that the motive behind the insistence on these practices, rather than being about "a yearning for what is now unattainable, simply because of the irreversibility of time" (Pickering and Kneightley 2006 in Angé & Berliner 2014, 2), is about "defining and claiming autonomy in the present" (Boyer 2006, 25), as well as defining the politics of the future.

## CHAPTER FIVE: OBJECTS OF INFRASTRUCTURE

### Material and Social Infrastructure

#### Breakdown at Botany Bay

During the summer of 2017, following my stay at Supersense, my friends and I decided to take a day trip to Botany Bay, a beach town located on the east coast of the UK. That day, as with most trips, I took one of my Polaroid cameras. In this particular case, I took a Polaroid 180, as I wanted to take some pictures of the colourful beach huts that I knew were popular in the area. While walking down the beach, I took my camera out to capture the huts, though as soon as I did, one of my friends, Katy, asked me if she could take a picture. I instructed her on how to operate the camera, which involves a manual focus and manually pulling the film out once it has been exposed and she proceeded to take a picture, only to discover after peeling it that the image had some bright white streaks, possibly indicating a light leak (fig. 29). Concerned by this, I decided to test the camera myself. As I tried to pull out the picture, several pieces of films came out, ruining most of the cartridge (which is extremely scarce). This situation not only left me without any ‘good’ pictures to remember my trip but I also returned worried that my camera might be broken beyond repair.

Back in London and hoping to tackle the light leak, I replaced the black tape that covered the bellows of the camera (which has been there since Steve gave it to me). For the film jamming, I took the case to the SCS members to ask about possible causes and fixes. Carlos, who I was going to meet during the following week replied within the next hour to explain,

“Yeah, with Fujifilm since the packs are made of plastic it often gets trickier to pull them out. I’ll bring a spare of metal pack film; I think I have one more. I always replace the back of the Fuji pack film with an original metal Polaroid one. It helps. Also, we can see the back of the camera if you want to bring it, there are some tips...”

When I subsequently met Carlos a few weeks later, I took my camera so he could have a look at it. After explaining the problem in detail, Carlos proceeded to inspect the camera, and following some testing, he took out an empty original Polaroid peel-apart film cartridge and taught me how to transfer the pictures from the plastic Fujifilm cartridge to the original Polaroid one. From then on, this became a task that would have to be carried out every time a new film cartridge was used, which according to Carlos, would stop the film from jamming.

A few days later I messaged Carlos, “Hi, just yesterday I tried it [the camera] and it worked great! No light leaks and no jammed film! Thank you sooo much for your help.”

This brief account brings attention to both the vulnerability and fragility of media technologies in terms of the material failure of the object (Carroll et al. 2017, 5); the decay of the bellows and the malfunction of the plastic cartridge; as well as the breakdown of the formal infrastructure needed to source the materials, the knowledge, and skills to maintain and repair it.



*(Fig. 29) Polaroid Land Film with Light Leak*

Throughout the chapters so far, current Polaroid practice has been addressed through concepts of sociality and materiality, attending to topics of mediation, embodiment, as well as the intertwining of analogue processes with digital ones, establishing that the current Polaroid practice is both a continuation and transformation of the old, that is, a new old practice. In addition, the previous chapter focused on the economic and ideological framework that produces obsolescence, in which technologies are constantly inscribed in narratives of progress, directionality, and irreversibility, all which are challenged by the continuation of Polaroid practice. As a result, the new old practice of Polaroid exists in a place of vulnerability, prone to disappearance, as it relies on complex socio-technical ensembles (Larkin 2008) needed to secure its functioning. At the same time, this same

vulnerability has enabled a range of creative practices that challenge the notion of obsolescence and the ‘death’ of the object.

Following the breakdown of Polaroid Corporation, this fifth chapter addresses how formal infrastructures and their subsequent breakdown rather than the end, can be considered as a new beginning (Lepawsky and Mather 2011; Martínez 2019). By focusing on the way things, knowledge, and skills are sustained within social and material networks, in addition to the fundamental role informal infrastructures have had in the sustenance of the practice, this chapter addresses the problems Polaroid practice faced when the Polaroid Corporation’s formal infrastructure broke down and the supply chain of film was interrupted, resulting in the once invisible consumption network becoming visible.

Furthermore, the breakdown of the Corporation also meant that cameras, as the ethnographic account at the beginning of this chapter depicts, started to fall in a state of disrepair, giving rise to new forms of materiality that emerge from failure (Larkin 2008; Collier 2011; Jackson 2014). Having said that, looking at Polaroid from an infrastructural perspective, reveals both the unbreakable bond between infrastructure and the object itself, as well as the way in which changes in the infrastructure of the media technology, in this case, Polaroid, have altered the way the practice is perceived and experienced. Practitioners, thus, rather than emulating or trying to rebuild the previous Corporation’s infrastructure, through innovative and creative practices (Facebook groups, crowdsourcing, tinkering, and upcycling) have replaced the missing infrastructure with new social and material formations, ultimately giving rise to a new practice that, though based on an old one, has its own values and meanings. By considering these challenging practices (to obsolescence and waste), this chapter also argues against the linearity of commodity production and circulation (Lepawsky and Mather 2011, 244), instead arguing that when it comes to the commodity chain, it is necessary to take into account the malleable and transformative capability of the object whose ‘life cycle’ extends far beyond that of obsolescence.

## **I. The Breakdown of The Polaroid Corporation**

### **Changing Hands**

The Polaroid Corporation is until today one of the most iconic brands of the western world (Buse 2016, 214). Polaroid, according to Jamie Salter CEO of Hilco (one of the companies responsible for buying Polaroid back in 2009), “was attractive because it ‘is ‘iconic’ and has ‘100-per-cent brand awareness’ in North America and very high awareness worldwide” (cited

in Buse 2016, 214). This brand awareness was related to Polaroid's stability, as it had been running since 1937, making it a long-lasting company, along with its associations with innovation and quality (Ewing 2017, 12). However, when Salter made this announcement, the corporation had already been dealing with serious problems, its stability coming to a halt in October 2001 when it filed for Chapter 11 Bankruptcy Protection, changing hands several times from there. Following the bankruptcy, the Polaroid Corporation was purchased in 2002 by One Equity Partners, who, while allowing the film business to continue, quickly began dismantling many of the company's divisions and licensing the name to sell other electronic goods (Buse 2016, 211). Later, in 2005, the Company changed hands again, this time it was purchased by Petters Group Worldwide who closed the factories in The Netherlands, Mexico, and Massachusetts, and in 2008, when the Director was arrested for financial fraud, put a halt in all Polaroid operations. Then came Hilco, along with Gordon Brother, who exploited the franchising and licensing of Polaroid's name and intellectual property (Ibid 212), until it was purchased by PLR IR Holding, from whom The Impossible Project acquired the rights to be able to call themselves Polaroid Originals. This summary of the Corporations' hand-changing explains the way in which, with each reorganization, the Company shed both costs and obligations (employees, R&D division, pensions, funds, etc.), and sold its assets (real state, inventory, the Polaroid Collection) (Buse 2016, 213), planting the seeds for Polaroid's infrastructural breakdown, and the consequences this brought for the practice, ultimately transforming it.

### **Visualizing Infrastructure**

In his seminal work about media infrastructures in Kano, Nigeria, Brian Larkin focused on the way the radio and cinema were influenced by colonial politics and became fundamental for the shaping of a certain type of modern citizen (2008:21). He analysed how media infrastructures come to be more than transmitters of content and are rather "built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space" (Larkin 2013, 328). For Larkin, media technologies in Kano revealed that technical infrastructures rather than simply representing progress through materiality were embedded in complex political formations and expectations, revealing that infrastructures can be both discursive and material (Ibid). This double capacity of infrastructures is consistent with the case of the Polaroid Corporation's infrastructural breakdown. Materially, the breakdown of Polaroid's infrastructure meant that practitioners were no longer able to purchase the needed materials, and for the first time, "Polaroid film—a mundane, mass-produced object—briefly



became disproportionately precious” (Buse 2016, 208). As a result, the once invisible film supply network become visible due to practitioners’ inability to get hold of the film. This was something that Rhiannon recalled vividly: “I went to my local *Boots* store to get some [film], but there was none left.” Rhiannon’s situation, though the most illustrative one, was shared by many practitioners, such as David who also recalled trying to buy film while traveling around South America only to be told it was no longer available.

The notions of visibility and invisibility in relation to infrastructures, however, is a prevalent one while discussing infrastructures. Parks and Starosielski, building on Heideggerian notion about breakdown revealing thingness<sup>104</sup>, argued that infrastructural networks only become visible when breakdown happens (2015, 6). However, having in consideration the case of colonial Nigeria in which power was exerted through the visibility of infrastructures (Larkin 2013, 336) (see also “techno politics of visibility” in Schwenkel 2015, 521), Larkin maintains that “visibility and invisibility are not ontological properties of infrastructure; instead visibility or invisibility are made to happen as part of technical, political, and representational processes” (Larkin 2018, 186). What Larkin’s argument suggests is that infrastructures are both technical and conceptual (Larkin 2008, 244), discursive and material (Larkin 2018:178), and the way they are framed depends on the desired effect infrastructures intend to achieve (Larkin 2008, 328). Discursively, the breakdown of the Polaroid Corporation network is consistent with Parks and Starosielski’s analysis of the way “capitalist societies generally educate people to appreciate the ‘conveniences’ and ‘choices’ of modern consumer technologies, but remain blind to the infrastructures that support them” (2015, 6). Their argument on blindness, which stems from Marx’s commodity fetishism that obscures the value (product of human labour and its relations) of the commodity (K. Marx 1999, 48), echoes Polaroid users’ lack of awareness of the relationality of Polaroid’s infrastructure, that is, the way it “concern materialities as much as technologies and organizations, and they emerge for people in practice” (Holt and Vonderau 2015, 80) before it broke down.

Finally, the material breakdown of the Corporation’s infrastructure, that is, the scrapping and selling of the factories, subsequently eliminating any possibility of the film being produced again, indicates a broader discourse of infrastructural failure by modernization where “the decline and disappearance of Polaroid film... [is seen as due to it

<sup>104</sup> The tradition that sees infrastructure as invisible can be traced back to Martin Heidegger’s example of the hammer and how, when in work it is ready-to-hand (*Zuhanden*), it is invisible. Yet when it breaks down it becomes present-at-hand (*Vorhanden*), that is, visible (Heidegger 1962, 103). For an extended account on Heidegger’s example and its relation to infrastructures see Schwenkel 2015 and Jackson 2016.

being a] victim of technological change, that ‘digital did it in’” (Buse 2016, 208). This framing of the breakdown of the Corporation in terms of progress (modernization) directed all responsibility on the hard networks – material infrastructure – but ignored the responsibility and intentionality of the soft ones – institutions, organizations, and managerial division. The framing of infrastructural breakdown through modernization has been written about by Stephen Collier in relation to Post Soviet heating infrastructure (2011, 205), though as opposed to the case of Polaroid, in the case of Soviet Russia, heating infrastructures were maintained and preserved despite modernization narratives and the neoliberal model of privatization and marketization (Ibid, 206). Both the Polaroid Corporation and Soviet heating system examples suggest that infrastructures’ materiality and discourse cannot be thought of separately but are closely intertwined, and extend far from the material realm into the whole socio-technical system of the practice, that is, the expertise and skills needed to maintain or repair the cameras, the knowledge and skills needed to operate them, as well as the channels needed for their circulation.

### **Informal Networks of Sociability**

“Breakdown disturbs and sets in motion worlds of possibility that disappear under the stable or accomplished form of the artefact,” Jackson argues referring to the networks of sociality and innovation that emerge from breakdown (2014, 230). Alternatively, Christine Schwenkel, in observing the irregular water supply in state buildings in Vihn, Vietnam, notes that the breakdown of infrastructures, rather than being an exception, in many cases, such as in the Global South where disconnection predominates over flow, it can become the norm transforming breakdown in an opportunity for innovation and improvisation (Schwenkel 2015, 522).

The breakdown of the Polaroid Corporation becomes a heuristic device to understand how things worked and circulated (Parks and Starosielski 2015, 130) formally and officially, and the informal unofficial channels that needed to be put in place in order for the practice to continue to exist. Before going into the analysis of the informal Polaroid networks, first, it is necessary to address the concept of informality. Most commonly used to describe practices that emerge unofficially, Ledeneva argues that informality corresponds to “the world’s open secrets, unwritten rules and hidden practices assembled in this project as ‘ways of getting things done’” (2018, 1). Hard to define, Ledeneva states that informality is often associated with pre-modern society, though it is used “to describe practices that emerge unofficially” (Ibid), yet she also notes that, “informality is central to local culture and

community life in the form of giving and sharing, which is not necessarily related to poverty and inequality” (Ibid 4). This understanding of informality as the unofficial, however, becomes tangled when considering Polaroid. Due to the lack of a formal official network (following the breakdown), in Polaroid’s case it is no longer possible to distinguish the formal from the informal, the official from the unofficial. When the formal channels of production, consumption, and distribution are no longer in existence and informality emerges as the only alternative, as Hart suggests, the dialectical division between formal and informal becomes nonsensical (1985, 57; Jenkins 2000, 14).

I focus here on Ledeneva’s conceptualization of informality and the way sharing and giving are fundamental for its emergence. Consequently, the fieldwork vignette depicting the malfunction of the Polaroid 180 camera, along with the sociotechnical ensemble that emerged from it, represents a low-scale example of the informal networks that needed to be set in place following the Corporation’s breakdown. On a larger scale, though, these informal networks started with Florian Kaps approaching the Polaroid Corporation’s CEO multiple times in order to persuade him to continue with the film production. This situation ended with Kaps and Hoeller accepting a deal to sell ‘faulty’ factory seconds through their website *Unsaleable* which was “the very best (and very only) place on the internet to buy analogue Polaroid and even more importantly it was the place to learn about different films, formats and their compatibility” (Kaps 2016, 126). Even so, the establishment of *unsaleable.com* – which represents only a portion of the informal networks that appeared back then, as many others might have emerged but remained under the radar – was the beginning of several attempts to secure the necessary resources for the practice to continue, which expanded beyond the material (availability) into the social. Accordingly, these informal networks could also be seen in the websites that practitioners set up to save the practice as a whole – *savepolaroid.com* and *save-polaroid.com*. Along with *polanoid.net*, “a global ‘Polaroid-only’ online picture-sharing platform... A perfect place to meet, connect and get to know each other, as well as an ever-expanding online gallery presenting amazing Polaroid from all over the planet” (Kaps 2016, 126), created by Kaps and Hoeller in 2005. Indeed, these website ventures indicated the way in which breakdown, beyond establishing alternative material networks (later seen in the redevelopment of the film formula, and the tinkering practices) also enabled “a rich space for growth and development of new social relations” (Carroll, Jeevendrampillai, and Parkhurst 2017, 2; Larkin 2013); the Internet seemed to be the perfect place for this sociability to emerge (chapter 1).

The culmination of this (informal) sociality can be seen in the established Polaroid social media communities, particularly Facebook's The Impossible Project group, established in 2009 by a practitioner (as opposed to the Company) which has more than 9000 members and has become a social pillar, or as Simone argues, a people's infrastructure (2013) in which the practice goods (cameras, film, accessories), knowledge, and skills are secured by practitioners. (This can also be seen in crowdfunding campaigns that seek to secure funding for maintaining certain media technologies that are facing impending obsolescence). New practitioners would regularly come to the Impossible Project Facebook group, introduce themselves, and ask for advice on how to get started. This involved questions regarding what cameras were better suited for beginners, tips for shooting film, and more importantly, help with solving issues, troubleshooting, repairing and maintaining cameras. This last issue was not restricted to new users, but also for long-term practitioners like Ralph, who on one occasion posted, asking for help to get started with a particular camera.

“So Polaroid Land cameras? How do I test once I get one? I'm looking at 250 or a 320/340 at the moment, but only want to spend under £30 for one, as it just to see if I can get into it. I know the Fujifilm stuff is scarce, but if any of you are willing to meet up and show me how to use one in return for some lunch, a pack of integral film or something, please let me know.”

A few days later Ralph posted again,

“So that 340 [camera] :). Great condition and the EverReady 4.5v battery in it still works! Then I spoke to [member] about the FP100 film and the compression problem re the plastic cartridges; the first sheets and the paper tab. Seeming this stuff is sacred, I may just wait for the OneInstant film to use in the 340.”

The decision of Ralph to purchase the 340 Polaroid camera suggests the way in which infrastructure, or the breakdown of it, and the subsequent scarcity and need of materials, bonds people into collectives (Larkin 2008, 6), at the same time it demonstrates how with the closure of the Corporation the responsibility of an 'official' network was passed onto individuals<sup>105</sup> (Penner 2013, 59). Nonetheless, with this argument, I do not intend to suggest that before the closure of the Corporation, sociality didn't exist around Polaroid, in fact

<sup>105</sup> Barbara Penner argues that in the case of the water closet in England it was the other way around, with the responsibility of individuals (in the management of waste) was passed to a system.

during the 70s and 80s several communities emerged, like those recorded by Tom Bianchi in his book *Fire Island. 1975-1983*, a 300 Polaroid-picture collection that depicted the life of a ‘closeted-gay’ community in 70s New York and the way Polaroid through its materiality enabled the community’s sociality and memory. In an interview with Vice, Bianchi expressed his feelings about the camera that started all,

“So, the important thing about this camera was that it allowed me to take the picture and a few minutes later put it out on the table for people to take a look. It made everyone immediately more comfortable and I very quickly formed the intention to show the world what a cool, amazing place the capital of Queerdom was. Or the provincial part of it” (Vice 2013).

Or the case of America’s amateur pornography and swinger communities that used Polaroid’s irreproducible, and instant qualities to secure and circulate their practice in a time where laws about nudity were prevalent<sup>106</sup> (Edgler and Kiser 1982). Both of these communities that emerged thanks to Polaroid technology allowing them to bypass a large section of the existing photographic infrastructure, i.e., the third-party developers who might judge the film, differ, however, from those that emerged during the Corporation’s closure. The former communities concentrated on the social and relational capabilities that Polaroid enabled, but not on securing the photographic practice and its circulation as the latter ones did.

By drawing attention to the breakdown of the formal infrastructure of the Polaroid Corporation and the emergence of the social and material informal infrastructural networks that have sustained the practice ever since<sup>107</sup>, I have tried to bring attention to the role social networks play in the continuation of the Polaroid practice. In this sense, the breakdown of its infrastructure demonstrates that the practice’s “possibility of circulation, its foreclosure, and the ability to overcome that foreclosure by finding a way around it or waiting it out” (Larkin 2008, 195) depends on the people’s infrastructural role (Simone 2013) and the new relations of solidarity and sociability (Schwenkel 2015, 522) that emerge from it. Still, people’s

<sup>106</sup> In *Polaroid Sex: Deviant possibilities in the technological age*, Edgley and Kiser give the example of a Maryland couple whose Polaroid pornographic images were discovered by school authorities (after their child took them to school). After being reported to the authorities, the couple was convicted of “unnatural and lascivious acts” (Edgley and Kiser 1982, 60).

<sup>107</sup> It could be argued that up to some extent, Polaroid Originals have ‘officialised’ the practice of Polaroid once again, however, their focus rather than being in the original products (older cameras that they continue to sell in refurbished form) is on their new cameras and products. Hence, practitioners who rely in older cameras still need these unofficial networks.

infrastructure expands beyond the purely social into the material realm in the form of the maintenance, repair and tinkering practices that “may embed crucial elements of skill, innovation, and creativity” (Jackson 2017, 177), ultimately altering the way the practice is experienced.

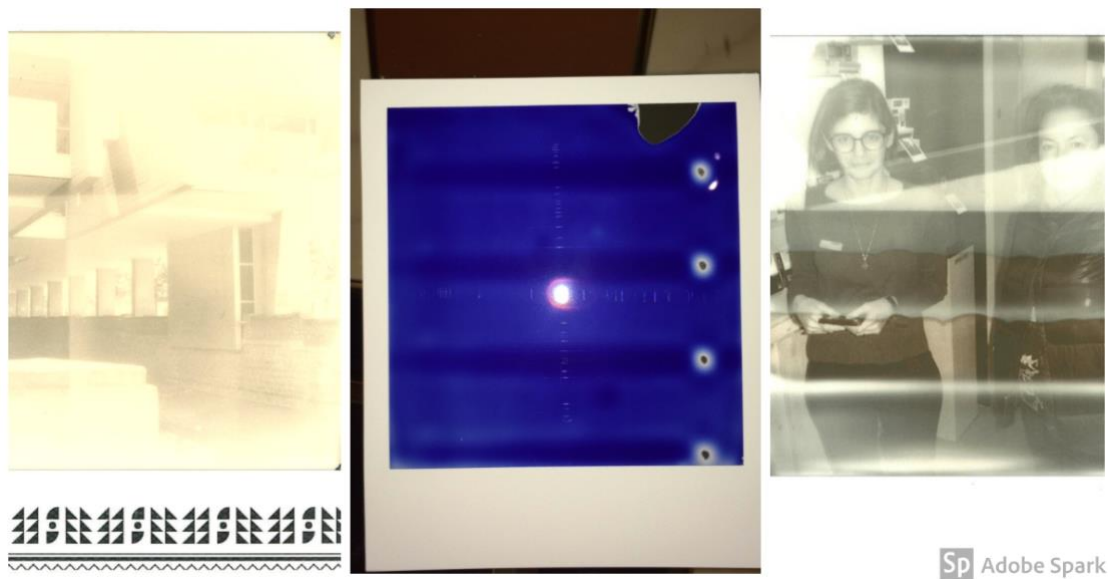
## **II. The productivity of breakdown**

“Who knows a good place for repairing or maintaining Polaroid cameras in New York, London, Sydney, etc.?” was a constant question posed by members of the SCS or The Impossible Project Facebook groups, for, as is to be expected with photographic cameras (or any other media for that matter), after a few years of usage and no Corporation to service them, Polaroid cameras started to breakdown and fall into a state of disrepair (fig. 30). For practitioners having no ‘formal’ place to maintain or repair their Polaroid cameras – due to most photographic stores no longer offering the service or lacking the skilled workers who knew how to fix them – meant that the continuation of their practice, has had to rely on informal social and material networks of “autodidacts who have figured out how to repair and maintain them” (Parks 2015, 122). The lack of supplies and materials to do so has also made people “engage with technologies in new and sometimes surprising ways” (Jackson 2014, 230).

Breakdown, Barbara Penner argues, is inherent to infrastructures (2013, 40), and despite the disruptive effects this breakdown might have, “sociotechnical forms and infrastructures, large and small, get not only broken but restored, one not-so-metaphoric brick at a time” (Jackson 2014, 222). According to Jackson, repair can be defined as “subtle acts of care by which order and meaning in complex socio-technical systems are maintained and transformed, human value is preserved and extended, and the complicated work of fitting to the varied circumstances of organizations, systems, and lives is accomplished” (Ibid). The inherence of breakdown to infrastructures enables the emergence of a regime of maintenance and repair in which people “in developing contexts have adapted or ‘reinvented’ imported technologies, localizing and using them to contest western hegemony, create tactics of cultural survival, or respond to oppressive state policies or socioeconomic conditions” (Parks 2015, 115).

In the case of Polaroid, more often than not, the lack of formal repair networks meant that cameras had to be shipped across the globe in order to access the needed service, altering the geographical location of the practice from locally-based shops, to a worldwide repair network. This is the case of Mint, a Hong Kong-based Company funded in 2009 that sells

and repairs Polaroid SX-70 models, as well as developing their own innovations on classic film cameras. Receiving excellent reviews from the Polaroid community, Mint has made its name by repairing and maintaining Polaroid cameras, and by innovating with them. The case of Mint, and the other places where practitioners source their repairs (for example, The Impossible Project store in Enschede, and others in the USA), confirms that “local repair networks are connected in turn to global networks of consumption and repair, through both materials and knowledge” (Ahmed, Jackson, and Rifat 2015:5).



*(Fig. 30) Polaroid Pictures Showing Faulty Camera Rollers Collage*

Because the knowledge required to maintain and repair 40 to 50-year-old cameras is not widespread and is particularly tied to the former Polaroid factory in Enschede, now in the hands of Polaroid Originals, or Hong Kong, means that the cost of having one’s camera repaired can easily stretch into hundreds of pounds just from the act of shipping. As a result, many practitioners, instead of having their cameras serviced by (the few) experts, decide to source the necessary knowledge and skills from a global network of autodidacts, such as the case of Carlos fixing my Polaroid 180. This collective sourcing of knowledge was also present when practitioners, seeing the lack of proximity of help, decided to undertake the task themselves by following advice from other members of the community, advice they found by asking particular questions or searching for dedicated videos made with the intention to help others. This was the case of “flea-market tips for buying Polaroid cameras”,

a YouTube link posted on the Facebook group<sup>108</sup>, or the sharing of (eBay) links of people selling replacement ‘skins’<sup>109</sup>, or the seeking out of particular members who are known for their skills and knowledge in repairing cameras. Still, the practices of care that practitioners engaged with were not only focused on the maintenance and repair of the cameras, but also in the deployment of creative repair practices (Jackson and Kang 2014; Ahmed, Jackson, and Rifat 2015) – those Sennett termed dynamic (as opposed to static) (2008, 200). These practices, rather than returning the camera to its previous state, through adapting it to different formats, created a new object by challenging obsolescence through repair (Martínez 2019, 9). The informal networks of materiality and knowledge, and the deployed practices that are needed to maintain and repair Polaroid cameras, hence, expose two aspects of the productivity of breakdown: (1) its innovative and improvisational capability, and (2) the re-enchantment of the practice by capitalizing ‘errors’.

### **Improvisation and Innovation**

“Failure is the gap that follows the collapse of one mode of life and precedes the development of a new one” (2018, 2) Carroll, Jeevandrampillai, and Parkhurst argue in *The Material Culture of Failure*. Their argument, contrary to common belief, proposes that failure, rather than being a binary opposite to success, can be a vehicle for productivity and innovation (Ibid 7). Similarly, improvisation, as Jackson explains, “may also embed crucial elements of skill, innovation, and creativity” (2016, 177).

With the notion of failure in mind, I would like to go back to the case of Mint, the Company in charge of repairing and developing new innovations to Polaroid cameras, and whose websites state:

“Photography is an ever-changing art form—but despite its ups and downs in the last few decades, instant film photography hasn’t changed much since the release of the SX-70 back in 1972. Our founder felt that there were still more to be done and chose to carry on that legacy. He decided to create his own line of products which would marry modern innovations in technology with the timeless, familiar design of the SX-

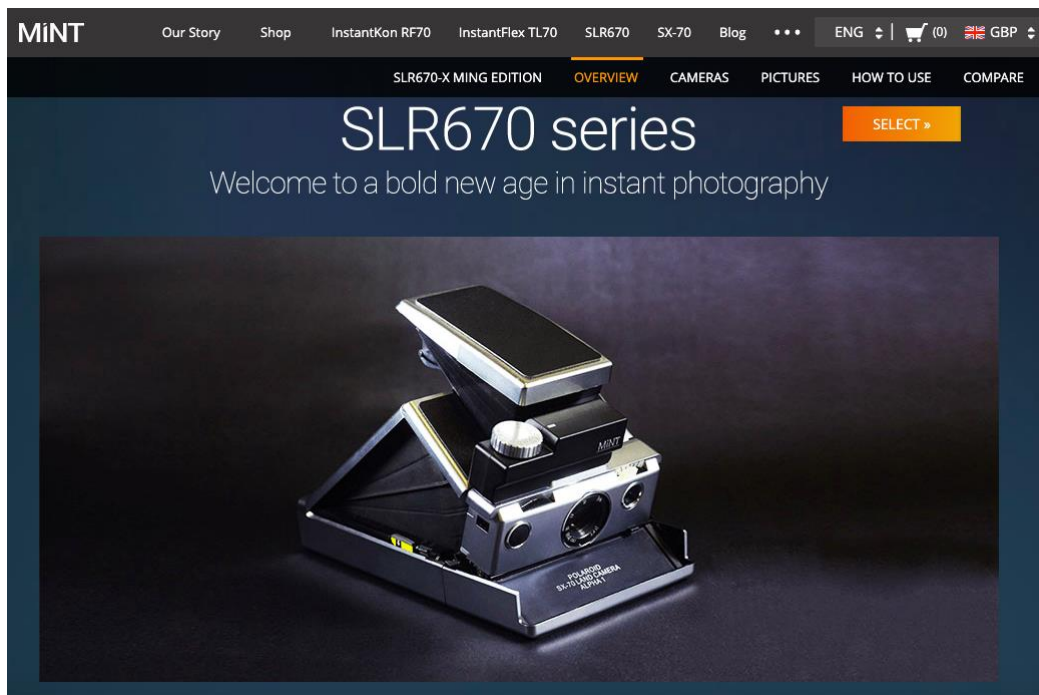
<sup>108</sup> Youtube has become a fundamental platform in which practitioners upload explanatory videos aimed to help other users to overcome their camera issues. Even so, the role of Youtube in DIY far exceeds that of Polaroid, into thousands of other topics.

<sup>109</sup> Polaroid SX-70 and SLR 680 foldable models were originally covered either in leather or vinyl. However, with time these covers worked out and need to be replaced.



70 to keep the magic of the Polaroid experience alive.”

The marriage of the timeless Polaroid camera with modern innovation, in this case Mint’s SLR 670 Series (fig. 31), an adaptation of Polaroid’s SX-70 model that through a *time machine* – a small device that is attached to a previously modified camera – enables practitioners to access manual settings that would otherwise not be available for these cameras, suggests that following breakdown of the Polaroid Corporation (and with it the halt of the research division that made Polaroid photography worldwide known), practitioners have taken upon themselves to tinker with their cameras in order to bring them “to the modern age” and meet the contemporary photographic expectations. In this sense, the capacity of practitioners to adjust shutter speed and ASA settings on a traditional Polaroid SX-70 camera suggests that they can easily be equated with newer cameras that give users these options, ultimately creating a new practice out of an old one.



(Fig. 31) Mint’s SLR670, Polaroid’s SX-70 Adaptation, Website Screenshot<sup>110</sup>

The case of Mint’s SLR 670 Series is one of a kind, as they are the only company offering these highly specific adaptations, though other forms of adaptations, albeit less ‘professional’, also circulated within the community. One such example was the case of an

<sup>110</sup> <https://mint-camera.com/SLR670/cameras/SLR670m/>

engineering student who posted in a Polaroid Facebook group offering his services “preserving old school technology” by refurbishing, repairing, and converting Polaroid cameras. The camera conversion the member was offering, contrary to his aim of preserving, rather suggests taking cameras and fitting together their remains and debris events (Lévi-Strauss 1966, 22) through “modern innovations” in an attempt to build something new. Additionally, the fact that these services are often offered in Facebook groups, suggests, once again, the global character that local Polaroid practices have acquired now the ‘formal’ infrastructure is no longer in place.

In his seminal work *The Savage Mind* (1966) Claude Lévi-Strauss, in observing the two different modes of scientific thought, that of the man of science, and that of the savage (the engineer and the bricoleur, respectively) argues that by taking what is at hand, the bricoleur “build(s) ideological castles out of the debris of what was once a social discourse” (Ibid 21). With this in mind, the Polaroid conversions carried out by Mint or autodidact practitioners, i.e., the transformation of media debris into new media, is linked to residual media practices (Acland 2007) in which functioning media hardware are exploited in order to reach their full potential (Parks 2007, 35) through processes of electronic salvaging and repurposing. These processes of salvaging and repurposing, as Parks notes, are carried out according to entrepreneurial expectations of turning e-waste into capital by refurbishing or sourcing raw material (Ibid 37). Though in the case of Polaroid, rather than being moved by revenue, salvaging and repurposing are moved by passion and an interest in extending the cameras’ possibilities. Still, contrary to Lévi-Strauss’ distinction of the bricoleur and the engineer as representing different modes of thought, the ‘Polaroid bricoleur’ encompasses both the craftsman of the engineer and the imagination of the bricoleur; a contradiction also observed by Harvey and Knox’s in the Peruvian context (2015, 107). The Polaroid bricoleur, then, behaves in a similar way to the one noted by Latour while analysing Aramis – the detachable transportation system envisioned for Paris – its breakdown, and the hands-on approach of the engineer as soon as things stop running smoothly (Latour 1996, 110); confirming that when infrastructure breaks down both engineer and bricoleur behave in similar ways, tinkering with what is at hand (fig. 32).



*(Fig. 32) Screenshot of a Polaroid Roll Film Camera Adapted To Instant Format posted on The Impossible Project Facebook*

Arguably, the culmination of these tinkering practices can be observed in the collective attempt to save FP100C pack film, recently discontinued by Fujifilm, and in the case of Crowley’s New 55. Crowley’s project was not alone in this endeavour. During my time writing, I witnessed multiple projects that intended to take the continuation of the film into their own hands. One such example was CatLabs, a US-based large format-dedicated photographic shop who, upon seeing Fujifilm’s discontinuation, announced they would be taking over the production, only to move away from it two years later. Eventually, the task was taken up by Kaps, who by gathering collective knowledge – what he described as “connect[ing] with all superheroes of the universe” in his blog – managed to redesign it.

“After zillions of hours discussing this topic with my network of experts including many team members of the original packfilm production team, it was the SUPERHERO with the smallest rucksack full of old ideas, UWE MIMOUN, who pointed us towards a simply brilliant, super easy and even environmentally friendly new concept. In my opinion, this concept is even better suited than the old one to

fascinate new generation customers, perfectly aligned with the new positioning of NEW PACKFILM 2018, as a niche market product in a more and more digital world” (Supersense 2018).

Following Kaps’ words, the solution for packfilm, rather than being in the past, that is, trying to reproduce the film in the way it was usually made, was actually in finding a novel way of producing it. This, as much as the faulty subcomponents of phones are rerouted and reused in Dhaka and Kampala, “becom[ing] in effect a different object: new but not radically new, separated from and connected to its past by the forms of breakdown, maintenance, and repair through which it has passed” (Jackson 2016, 179). Polaroid cameras, through the conversion of their formats, and adaptation of their circuits into manually controlled modes, or new attempts to develop film, confirm once again that tradition is constantly being met with innovation.

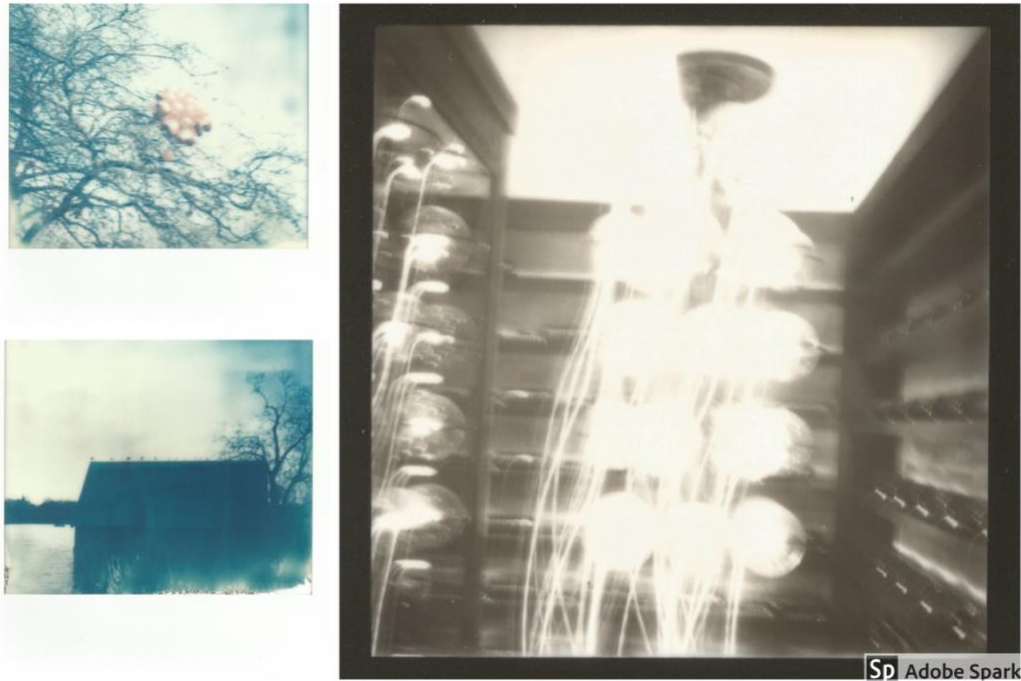
### **Capitalizing errors**

Parks and Starosielski suggest in the introduction of *Signal Traffic* that infrastructures are discursive as much as they are material, due to them being tightly linked to narratives of progress and modernity (2015; Larkin 2002; Spitulnik 2002). Their visibility is used to enchant people through “imaginative possibilities generated by spectacular infrastructures” (Schwenkel 2015, 527; Collier 2011). As a result, when infrastructures breakdown or fail, rendering daily activities more cumbersome, they appear to do the exact opposite: they disenchant. This is the case of Nigeria’s intermittent radio infrastructure, as discussed by Larkin, or Vinh’s problematic water supply, in which out-of-order becomes the natural order, and disenchantment quickly becomes part of people’s daily routine (Schwenkel 2015, 522). However, by following this argument, the case of Polaroid presents itself as paradoxical. Edwin Land’s original technology was supposed to ease the photographic process, which is arguably exactly the opposite to what it does today. Still, despite the unpredictability of the film and the constant ‘errors’ that practitioners experience, most practitioners don’t feel disenchanting or at least this disenchantment is neither long-lasting nor stops them from continuing with the practice, but in fact has pushed many of the innovations that have previously been discussed.

During a talk given at *The Photographers Gallery* in the winter of 2017, Kaps joyfully remembered the time that he and Hoeller purchased hundreds of packs of film from Mr Falk – a long-standing photographic shop owner – for what they believed was an incredibly

low price only to later discover that the reason for the price was that the film was expired, and therefore unsaleable by regular channels. In spite of this, Kaps recalled how that did not stop them from selling it, as they decided to label the film as ‘experimental’ and sell it in *unsaleable.com*, their online platform that sold seemingly ‘unsaleable’ film (factory seconds). This action, Kaps acknowledged, added extra value to it. Even so, the unreliable quality of the film is not restricted to this particular anecdote, but something that continues until today. Years after the creation of the *Unsaleable* platform, when Kaps and Bosman bought the last Polaroid factory in Enschede and founded The Impossible Project, they soon realised that reproducing the original Polaroid Corporation’s film was not an easy task. The process of reverse engineering and downscaling production, along with sourcing of alternative (to the original Corporation’s ones) materials necessary, led them to advertise their first film batches under a cautionary legend that specified ‘experimental’ results. This, for some, presented a major breaking point or disenchantment with the practice, as it was in the case of Sadie who was not willing to use Polaroid until “it was the way it used to be” (see chapter 4). Most users, however, along with Kaps and Bosman, saw in this new film formula not only a chance to continue with the practice (as there wasn't any other film available anymore and the remnants of the Corporation were becoming scarcer every day), but also the possibility to alter the way the practice had been conceived so far—from the hassle-free photography that Edwin Land intended, towards experimental, imperfect photography. It is arguable then, that this paradoxical way of incorporating the ‘errors’ of the practice, produced new sensorial and experiential conditions (Larkin 2008, 63). Hence, something that started as a practical approach to the breakdown of the Corporation infrastructure soon became part of the practice, ultimately re-enchanting it (fig. 33).

With both innovation and the capitalization on errors in mind, it is arguable that “there is a productive/generative capacity to failure” in which “failure produces a change in which a thing ceases being that which it was (or was expected to be), and radically becomes something other” (Carroll, Jeevandrapillai, and Parkhurst 2018, 14). This last argument confirms that the breakdown of the Polaroid Corporation, rather than foreclosing the original practice, or restoring it to what it used to be (which proved to be impossible due to the lack of resources and the size of the market) enabled another practice to surface, which as has previously been discussed through the concept of the new old, operates both as interruption and continuity, and innovation and tradition of the original.



*(Fig. 33) Polaroid Images Depicting Aesthetic 'Errors' (Expired Film Blue Tones, and 'Light Painting' due to Low ASA)*

### III. The Circulation of Polaroid Practice

Having analysed the way in which the informal infrastructure of Polaroid altered the way the practice was experienced materially, in this section I bring attention to how the breakdown affected the material (cameras, film, etc.) and social (knowledge, expertise, and skills) circulation of the practice.

When thinking about the way practices such as Polaroid materially circulate, the main places that come to mind are second-hand markets where “goods have both a use and exchange value that extends well beyond the first cycle” (Gregson and Crewe 2003, 2). According to Gregson and Crewe, second-hand sites provide new insights about exchange, extending their understanding beyond ‘the market’ and ‘the gift’<sup>111</sup> logics, to spatialized practices of exchange where people display both practical knowledge and labour (2003, 5). However, and despite the importance of secondary markets for the recirculation of objects, Gregson and Crewe’s analysis has changed due to the massification of the Internet and the proliferation of online second-hand selling platforms that have, at some level, transformed

<sup>111</sup> By the distinction of ‘the market’ and the ‘the gift’ Gregson and Crewe are referring to the anthropological debate between gift and commodities. According to early anthropology (Malinowski [1922]2014; Mauss [1970]2002) gifts, contrary to alienable goods (commodities), involved inalienable goods and create reciprocal relationship.

the traditional flea market site (and experience) from the local to the global. This alteration has had two main impacts on the way second-hand markets are experienced today: (1) The concept of the 'site' has shifted to one that might no longer be geographically bounded (Ellis and Haywood 2006, 45). (2) It has made information widely available and as a result the previously privileged connoisseurship is now accessible on every level of society (W. Gibson 2006, 19), ultimately making 'private' or 'hidden' objects readily available to anyone with an Internet connection (Ellis and Haywood 2006, 46). As a result of this, the main sites Gregson and Crewe identified as second-hand sites: flea markets and car boot sales (among other types of secondary market sites, like charity shops in the UK), did not represent a major circulation network of Polaroid cameras for the London Polaroid community (though it did at a small level), mostly because Polaroid cameras (and other Polaroid-related objects) were easily found online, enabling new geographical markets far beyond the UK or even Europe.

One of the consequences of this widespread accessibility brought about by the Internet (with people *googling* prices before selling), however, has been the rationalization of the market (W. Gibson 2006, 19), which has resulted in prices now becoming more standardized and inflated, leading to overpricing, eliminating the bargain myth of the flea market. This was echoed in the case of Maya, who had wanted to buy a Polaroid SX-70 for a while. The problem, she informed me, was that every time she visited flea markets – motivated by the widespread myth of the stroke of good luck (finding an extremely well-preserved and cheap camera) – the cameras being sold there were too expensive to even consider. Thus, as much as flea markets remain a topic that excites me (during my fieldwork I made sure to visit second-hand markets in various cities such as London, Vienna, and Zurich, looking for the 'stroke of good luck', to no avail), most of my interlocutors sourced their cameras online, which is why in this section I do not extend the analysis to flea markets, but rather focus on the circulation of Polaroid on second-hand platforms online.

In his analysis of an online platform dedicated to selling perfumes that are no-longer in production, Will Straw argues that the Internet "provides the preconditions for their perpetuation as material culture, as sensory artifacts, and as marketable commodities" (Straw 2007, 3), later adding that the Internet "reinvigorates early forms of material culture by binding isolated interests that would otherwise remain sparse" (Ibid 4). Although most practitioners relied on buying film from The Impossible Project store or the Photographers' Gallery<sup>112</sup> (both in Central London), eBay was the main site that came up when they were

<sup>112</sup> The rationale behind buying film through official sellers is because film needs to be store at a certain temperature in order to keep its qualities 'fresh', something that is hard to ensure from other sellers.

seeking to source other supplies – mostly cameras (for example see Ralph’s account at the beginning of this chapter), though other Polaroid Corporation items such as flashes, cases, and memorabilia<sup>113</sup> were also purchased. Though this was not restricted to eBay, as many other online platforms also enabled artefacts to be “pulled, from obscure places of domestic or industrial storage, artifacts whose value and intelligibility it manages to restore” (Straw 2007, 4), eBay remained the main key site in which Polaroid cameras and accessories circulated. By looking at eBay, I intend to shed light on the way Polaroid overcame the breakdown of its formal infrastructure by shifting the sourcing of its materials into the online realm.

### **Moving Cameras**

With 94.5 million users active by 2010 eBay (short for electronic bay) is the biggest business-to-consumer and consumer-to-consumer e-commerce platform online. In 1999 an article published in *Brandweek* argued that eBay was a “mix of e-commerce, virtual community and nostalgia for all manner of bric-a-brac” (Cheng 1999). Though currently eBay has distanced itself from the collectors tropes that first gave rise to it – eBay creator Pierre Omidyar is said to have created the platform after his wife expressed her love for Pez candy dispensers and her desire to have a place to share and trade them (Ibid) – it continues to be the biggest to-go place where “items can be bought and sold years, decades, or even centuries after their ‘shelf date’ would have expired” (Zalot 2013, 23).

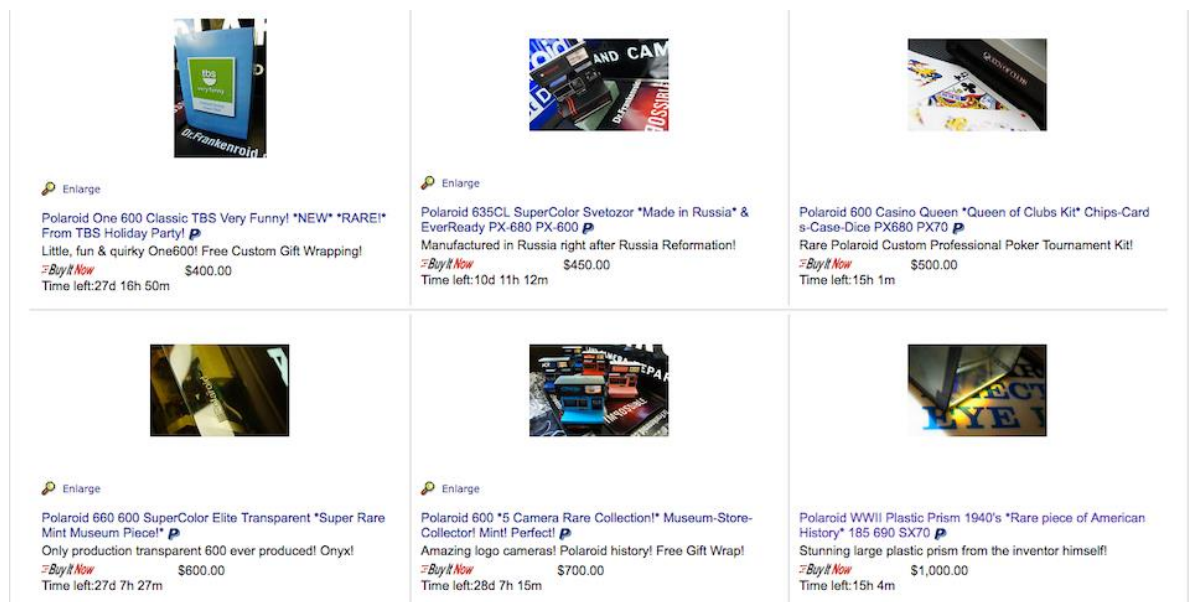
Accordingly, and considering that until recently (with the launch of three new cameras, one made by Impossible Project and two by Polaroid Originals) there were no ‘new’ cameras with which to use the Impossible Project or expired Polaroid film, nor official places to buy cameras directly, only small self-managed stores or market stalls that sold them, normally at exorbitant prices, anyone wanting to shoot Polaroid needed to source their cameras from second-hand markets or online platforms. This is confirmed by my own experience. In 2014 I purchased my first Polaroid camera, an Polaroid 1000 box-type camera from the 70s that arrived from North England; an SX-70 gifted by my father and which was purchased on eBay USA; and finally, my most recently acquired camera, a Polaroid 680, which was purchased from an eBay seller located in Germany. Still, this transnational sourcing was not

<sup>113</sup> Although Polaroid practitioners might engage in collecting Polaroid related items (or memorabilia), most of their purchases are intended to be used. This moves away Polaroid practitioners eBay practices from other ‘collecting rituals’ as the ones described by Ellis and Haywood (2006) and the audiophile community who saw on eBay a lack of sociality and inflated prices.



an exceptional process. Most Polaroid practitioners were constantly looking online for their desired cameras and film formats—not always with the intention of buying them but to educate themselves and have the chance to admire objects that are not available anymore (fig. 34)<sup>114</sup>. For Mary, for example, eBay not only provided her with the 4x5 film from the USA (far extending the capability of the flea markets’ locality and availability) but also, as she said, “pretty much all my cameras, instant-wise, except for one or two, have come from eBay”. Furthermore, the shift from established photographic shops to online purchasing from individual sellers suggests a shift in the economy, though rather than this meaning a replacement of a formal market for an informal one, seeing the lack of a formal one, the informal market took over and became the new formal.

With this argument in mind, online second-hand platforms have not only mobilized a whole circulation infrastructure, changing geographies of collecting, to the evolving distribution networks of collectables, but have turned themselves into fundamental ‘sites’ that have secured the continuation of the practice in the absence of official channels. Still, as the next section will explore, online circulation is not restricted to the source of material supplies but extends into the much-needed knowledge and skills necessary to operate (and fix) Polaroid cameras.



(Fig. 34) Dr Frankenroid's eBay Shop Screenshot<sup>115</sup>

<sup>114</sup> An example of this is the case of Dr Frankenroid's eBay shop. Displaying a large number of rare Polaroid cameras, with ranging prices from \$400,00 up to \$10,000, Dr Frankenroid's shop operates under a 'not sell price' logic, in which the products depicted in the site are labelled as 'museum pieces' rather than alienable commodities and are intended to "educate about use, value, and variety" (Karstan Smith 2014).

<sup>115</sup> <https://www.ebay.com/usr/dr.frankenroid>

## **Moving Knowledge/s**

Mary's process of learning to shoot medium format Polaroid photography (chapter 4) reveals the role people play in the emergence and consolidation of infrastructures. For Mary, it was social media platforms that enabled that particular knowledge.

“I started reading up online discovering at the Flickr groups that back then were the biggest source of knowledge and information. And I started seeing all these amazing photographers shooting in certain cameras, pretty soon after I bought my first SX-70 on eBay.”

When I inquired further about the community's importance to her practice, Mary explained how she exchanged information with some people, while others helped her sort out machine issues. Most of these interactions took place online on different social media platforms as there are no locally grounded centres at which to learn, nor any official experts from whom to source information. Seeing the difficulty of accessing the skills and knowledge, Mary recalled a time she had trouble with her 4x5 camera and decided to call a fellow photographer friend, whom she met through the medium format Facebook group she joined when she started shooting this particular medium.

“The community is very small, I found one on Facebook and I immediately joined. There have been a few people there that have been really helpful. [Member] has been great. He shoots large format regularly and every now and then there are questions, different things I don't understand, so I'll drop him a line and usually, he will help.”

She later added,

“Now, I'm at the point that I go on Facebook, and you get people who only recently have discovered instant film asking questions. Is it's quite nice to return the favour.”

Leo's case was consistent with the community narratives expressed by Mary, albeit in relation to a different technology (and a face-to-face mode, fitting to the pre digitally-mediated era). Leo started working at Supersense in 2014 after Kaps, who had recently purchased a record cutting machine from Switzerland and was looking for an operator, invited him to be part of

the project. As opposed to vinyl records which are made by pressing a mould into the vinyl, Master Record cutting<sup>116</sup> consists in using a lathe to cut a groove in the surface of a lacquer-coated aluminium disc in real-time. It is rare technique only carried out by a few people around the world. About this, Leo told me,

“I was 14 and saw a record store offering the service of cutting your own record. This caught my attention as I thought records could only be made by pressing [vinyl]. When I went in and asked the people about it, the information they gave me was too vague. This made me go and look for the technology, only to discover that one of the few places that did it was actually in my small village. So, I started hanging around at the place, watching how it was done. After a few weeks, I was invited to try it myself. I remember how they told me ‘not to ruin it’...and, of course, I ruined it! I was very nervous. ‘Press this button, now cut’... but the record didn’t play. I ended up working there informally for some years after school, that is how I learned.”

He later added,

“It is a really small community. Some in Germany, two in the UK, some in USA. But overall only a few. We exchange information [online] and ask for help with supplies and machine issues as there are no former people that did it alive anymore.”

Both Mary and Leo’s cases demonstrate that observation and social involvement are fundamental to the learning process of a technique, and that in the absence of formal geographically bounded ‘sites’ of knowledge circulation, online communities and platforms can take that role<sup>117</sup>. This observational and social aspects of repair skill learning were also noted by Jackson, Ahmed & Rifat in the story of Rupam (one of their interlocutors in the mobile repair market), who in order to gain the necessary knowledge to repair mobile phones “started spending his time at the repair stalls of the stadium market, where he would stand and silently observe the repairmen at work” (2015, 5). Mary, Leo, and Rupam’s accounts indicate how “skills and knowledge aggregate through regular and rigorous tactile

<sup>116</sup> Master Records were used during the 1930s and 1950s for recording broadcasts before they were replaced by tape recording, and later used for evaluating tape-to-disc transfers in the audio industry. This last use meant that some of these lacquer records are highly valued by audiophiles as they often present rare recordings. Another use, though less widespread, was for direct-to-disc recording, though it wasn’t used so much due to the difficulty of recording an LP in one uncut session.

<sup>117</sup> It is worth noting that *Youtube* has also played a role in the circulation of explanatory videos and troubleshooting tutorials.

engagements with different kinds of technical objects rather than via mastery over one thing” (Parks 2015, 122), and through which learning processes are performed (fig. 35).



*(Fig. 35) Elisa Explaining how to Calibrate the 20x24 Processors Rollers*

Furthermore, Leo and Mary’s stories are telling regarding the complexities of sourcing knowledge once technologies are deemed obsolete<sup>118</sup> and their infrastructure, that is, the knowledge, materials, and people are not in place anymore. This also suggest the way these practices are “sustained through apprentice relations responsible not only for flows of knowledge from ‘master’ to ‘apprentice,’ but also the production of social order, norms, and hierarchies and the reproduction of community skills and knowledge as a whole” (Jackson, Ahmed & Rifat 2015, 2). My interlocutors remarks, then, show how “limited resources can be put to work in many possible ways” (Simone 2013, 426); at the same time they demonstrate the essential role social media platforms have had in the exchange of goods, knowledge, and skills which bind people into collectivities (Larkin 2008, 6). Even so, the importance of people and wider communities in the developing of skills and specific know-

<sup>118</sup> The Museum of Obsolete Objects an online self-managed project, affiliated to the Media Archaeology Lab (MAL) at University of Colorado, that collects and evaluates the preservation status of obsolete or quasi obsolete media, notes that lacquer discs are a 5 out of 5 in media stability rating (readability), and a 3 out of 5 in obsolescence rating (easiness in playing) (Acetate/Lacquer Discs n.d.), this last figure due to them being able to be played in conventional record players.

how, challenges Larkin's initial argument of infrastructures being mainly material (2008), and suggests that, as Simone argued, people are also infrastructures (2013).

### **Conclusion: Practitioners' Infrastructure**

The breakdown of the Polaroid Corporation and the subsequent emergence of an informal infrastructure of production, consumption and circulation through which practitioners secured the continuation of the practice suggests that the breakdown of the infrastructure, rather than being the end of the practice, was the beginning of a new one, enabled by novel social and material configurations that led to the creation of a new practice based on an old one. Additionally, it demonstrates that although infrastructures (and what emerge from them) are invested in notions of progress and narratives of modernization (Larkin 2008; 2013) where "the unspoken assumption seems to be that 'superior' forms of technology naturally supersede existing ones through a process of evolution" (Penner 2013, 30), "new technologies do not simply destroy older forms of communication but call into being new mobilities and sometimes intensify older ones" (Larkin 2008, 6). The 'old' materials and their intersection with the 'new', then, comes to demonstrate that, as Jackson suggests, there are two radical forces operating in the western world: (1) the almost-falling-apart world, (2) and the world of fixing and reinvention (2014, 222). Today's Polaroid practice acts as a reminder that infrastructures are full of tensions, dynamics, and powers, as oppose to binary distinctions (new/old or formal/informal).

Furthermore, practitioners' insistence on securing the continuation of the practice by building networks of repair and maintenance, along with taking into their own hands the transmission of knowledge and skills, suggests, as Martínez noted, that to "repair is to connect" (2019, 9). Rather than representing the end of a practice, the breakdown of the materiality of Polaroid suggests that the ending for something might be the beginning for something else (Lepawsky and Mather 2011, 246). Thus, although media technologies are tied to discourses of progress where the new is supposed to symbolize advancement (and the consequent disappearance of the old), the continued intersection of the old in current practices challenges the linearity of the production and consumption of commodities, and suggests instead that "breakdown and repair are involved in remaking our understanding of precedence by de-naturalising linear life cycles" (Houston 2017, 55). As a result, the interplay between old and new in the current Polaroid practice reveals that repair has a temporal dimension, in which rather than bringing the objects back to their previous state, it also involves (material and social) change (Houston 2017). This revelation uncovers the

problematic of understanding media artefacts life cycle through linearity<sup>119</sup>, while at the same time, reveals the wider modern framework in which commodities are inscribed. Accordingly, if repair is not the end, nor the beginning (Lepawsky and Mathern 2011, 242) of the media object, but rather part of the infrastructure through which it is reproduced, it becomes necessary to extend the temporal linear model into one that takes into consideration the temporal complexities and intersections of the media artefact as it is produced in practice (Zielinski 2006; Mattern 2015), as it will be argued in the next chapter.

<sup>119</sup> The linear understanding of commodities refers to the notion that commodities have a beginning and an end. Traditionally, this perspective argues that a commodity's 'life' starts when it is produced and ends when it is purchased. However, this view had been challenged as it fails to take into account what happens with the commodity after it is purchased, or even after it is discarded (for an extended analysis, see Gregson et al. 2010; Gregson et al. 2013; 2014; Lepawsky and Mather 2011).

## CHAPTER SIX: OBJECTS OF TEMPORALITY

### The Heterotemporality of Polaroid

Just around the corner from busy Victoria Station there is a film store. The three-story blue building with a red door is crowned with a black and white sign which reads, *Mr Cad, For Everything Photographic*. This building clashes with the modern glass ones that populate this area of central London (fig. 36). The shopfront is crammed full of all sorts of analogue photographic and film equipment, each accompanied by a handwritten white tag that indicates the product's price. The shop motto, "for everything photographic", seems to meet expectations. Quite large in size, the shop is filled to capacity with analogue cameras, film packs, and a multiplicity of photographic accessories, such as lenses, tripods and camera bags, to the point that when going inside one has to be careful not to knock everything down. Piles of boxes are stacked onto shelves, big baskets full to the brim with 35 mm film, valuable lenses displayed behind glass cabinets, all among a huge variety of cameras: Kodak Brownies, Polaroids, medium format Hasselblads, and compact Canons (many of them in their original packages). There are also enlargers, chemicals supplies, film processors and a team of knowledgeable sales staff ready to help, commanded by Alex Falk, the owner of Mr Cad.

I first became aware of Mr Cad's photo shop because a friend of mine used to work there. Upon hearing that I was researching Polaroid and interested in analogue practices, my friend was adamant that I needed to see the place. The day of my first visit, a weekday morning during early autumn, the shop proved to be particularly busy. As we took a look around the place, I noticed the sales assistants helping customers – a young couple was looking to purchase a Kodak Brownie and some film to go with it, an old man was buying some film for his 35 mm camera and other customers were buying chemicals for processing their analogue images. To me, the shop evoked an aura similar to that of the Pitt-Rivers museum<sup>120</sup>: cluttered old glass cabinets displaying piles of 'stuff', dated cardboard ads depicting products from a previous time interspersed with the photographic products. However, this impression was quickly challenged once I realised that contrary to a museum, whose aim is to safeguard and preserve objects from being used, freezing them in time, at Mr Cad everything worked and was available for purchase. Rather than coming inside the shop as part of a museum tour, then, customers visited the shop with the normalcy of any

<sup>120</sup> The Pitt-Rivers museum, located in Oxford, UK, is an anthropological museum that is colloquially known for being 'a museum of a museum' due the collection being kept in the same way it used to be when it was first donated, is a four-story building 'crowded' with all sort of anthropological objects to the point it appears overwhelming.

other place, they wandered around looking at the products and asking for specifications. It appeared to me, then, that rather than a museum or an archaeological site, Mr Cad was a place that challenged the conception of old media technologies disappearing in the light of the new.

After browsing for a while, my friend introduced me to Mr Alex Falk, the soul behind Mr Cad. After greeting each other, upon hearing that I was interested in Polaroid, Mr Falk swiftly asked me for my thoughts on the new Type 55 colour film that Mr Falk, Kaps, and New 55 were currently trying to produce. Confidently, I mentioned that I had indeed seen the film recently and that I felt it was nice, but more importantly, a significant step into bringing back a film format that was once prevalent in the Polaroid industry. Upon hearing my answer, Mr Falk promptly replied, “Why make something that is no good? The colours are not right. They should be focusing on perfecting the black and white film instead of wasting resources releasing a film that is not good enough.” I looked at my friend standing next to me for help, who intervened, telling Mr Falk that he was asking tough questions, like always. Meanwhile, I tried to explain that even though the film was not perfect it was still important to keep going, that Polaroid practitioners didn’t care for ‘perfect’ but felt happy to have some film to shoot with, though to no avail. Mr Falk firmly believed that there was no place for a “half-decent” product, despite people being willing to use it. Before leaving, and in a last attempt to bond with Mr Falk, I asked him for his thoughts on the current Polaroid revival, to which he replied, exasperated, “When was it gone? I’ve been here selling it for 40 years.”



(Fig. 36) Mr Cad Shop Front, ©Google Street View



The interaction that I had with Mr Falk while visiting his shop made me wonder about the different temporality that appeared to inform the ‘time of Polaroid’, and question whether operative ‘old’ media technologies belong in the past, or whether they can be an active part of the present and future of media practices? And, even more, what does a Polaroid camera for sale on the high-street say about technological progress, time, and the assumption that the old vanishes, giving way to the new? With these questions in mind, and considering the discussions of the previous chapters, in this final chapter, I reflect on the relationship between the media object and time, and the way the western linear understanding of time (and history) has curtailed the possibilities of exploring the object’s own temporality. By drawing on the case study of Mr. Cad, and echoing Siegfried Kracauer’s understanding that “any historical period must therefore be imagined as a mixture of events which emerge at different moments of their own times” (1966, 68), along with a Polaroid image taken at The Impossible Project store in 2017, I address the way the “agency of things from the past” constitutes “our everyday lives in the present” (Dawdy 2016, 41), disrupting the illusion of chronological time (Henning 1995; Dawdy 2016); its *uncontemporaneousness* (Pinney 2005).

Furthermore, and in order to address the widespread perception that ‘the old’ disappears with the advent of ‘the new’, a situation that I have decided to term media amnesia, the first section of this chapter starts by analysing the relationship between material culture and progress (Engels 1902; Morgan 1907), which since the Enlightenment has conditioned our understanding of history as a continuity with no ruptures (Benjamin [1940]2003; Kubler 1962; Kracauer 1966; Palmié and Stewart 2016; Stewart 2016). In order to understand the temporal dimension of material culture, the second section of this chapter addresses why the anthropology of time (Munn 1992) framework is not suitable for the understanding of an object’s time<sup>121</sup>, and instead draws on the discipline of archaeology and media archaeology as a way of approaching an alternative conception of the artefact’s time. Finally, through a Polaroid image, and drawing on the concept of “heterotemporalities” (Hölling 2017), the third section of this chapter examines the possibility of material culture and Polaroid to reveal multiple temporalities (Kubler 1962), arguing in favour of an uncontemporaneous understanding of the material object (Pinney 2005, 265).

<sup>121</sup> Throughout this chapter, I will speak about artefacts, objects, and media technology’s time, for the sake of clarity, and drawing attention to the material quality of all of these, unless stated, I propose to understand all of them as equivalent concepts.

## I. Media Amnesia

The assumption that media technologies, such as Polaroid, experience a ‘revival’ or ‘return’ carries with it the assumption that somehow they previously ‘died’ or ‘disappeared’, and their current existence can be seen as a sort of ‘zombie’ version of previous media (Hertz and Parikka 2013). Even so, the convoluted nature of this assumption was brought to my attention by Mr Falk, for whom Polaroid has remained ‘alive’ in his shop, despite widespread belief that it was long gone, a belief that I encountered first-hand while working at The Impossible Project store in London. During my time there, I witnessed people’s reaction to encountering Polaroid cameras exhibited on the shelves next to what can be considered state-of-the-art technologies (the latest TV sets, mobile phones, photographic and video technologies that populated the Technology section of Selfridges). While some people reacted remembering Polaroid in the way one remembers a long-gone relative: “There used to be one of these cameras at home.” “My father used to own one of these.” Most people appeared to be suspicious upon the encounter. “Are these real Polaroid cameras?” “Do people really use them today?” “Do they still work?” “Why would anyone bother using one of these cameras?” “What is the point of having them?” These were only some of the questions that I was confronted with on a day-to-day basis. The incredulous nature of these questions was further exacerbated by people’s assumptions and understanding of Polaroid. They seemed to be completely dumbstruck about the fact that film cameras operated with black-and-white or colour film (and were unable to shoot both), an issue that seemed somehow puzzling considering film photography was the prevalent media technology 25 years ago and that they were old enough to remember. The fact that they appeared to have forgotten how film photography worked made me wonder how was this possible? And, why people were so reluctant to believe that Polaroid was still available? One possible answer to these questions appears to lie in what Siegfried Zielinski has termed as “psychopathia medialis” (2012) – a concept he expressed in a cryptic manifesto for artists working with technology and whose name honours other famous ‘psychopathies’ of the nineteenth century<sup>122</sup> – to refer to the capitalist’s compulsion with new media technologies (Parikka 2012, 12). This compulsion has also been noted by media theorist Jussi Parikka, who described it as part the “strategic amnesia of digital culture” (Ibid 13), something that Peter Buse identified as “the narcotic effects of new media... is a forgetfulness about the once new forms they have replaced” (Buse 2010a, 215), and Maycroft related to the “inculcation

<sup>122</sup> Mainly, Kraft-Ebbing’s psychopathia sexualis (1886), and Oskcar Panizza’s psychopathia criminalis (1898).

of anxiety in the consumer” (2009, 14; Packard 1963). People’s forgetfulness about the functioning of Polaroid, thus, can be related to the modernist notion of material culture through progress and the logic of new media (see Introduction) in which the arrival of the new means the replacement of the old<sup>123</sup>. However, this forgetfulness is not restricted to digital technologies only, but it has surrounded media technologies since the emergence of the first electronic media apparatus (Marvin 1989; Gitelman and Pingree 2003; Gitelman 2006; Parikka 2012).

In *When Old Technologies Were New* (1989) Carolyn Marvin argued that despite the telegraph being the first electronic communication technology, it has often been disregarded by media historians who consider other technologies, mainly radio broadcasting, as the first. By arguing against the widespread belief that radio marked a break from past technologies, Marvin noted how “the early history of electric media is less the evolution of technical efficiencies in communication than a series of arenas for negotiating issues crucial to the conducts of social life” (1989, 4). Since the publication of her book, media historians have continued to challenge the “hermeneutic reading of the new against the grain of the past” (Lovink 2003 in Gitelman 2006) by presenting arguments regarding the convoluted nature of the notion of new media (Marvin 1989; Gitelman and Pingree 2003), as well as the continuities and changes media undergo through time. Even so, despite media theoreticians’ attempts to push for ‘alternative’ media histories (seen in Zielinski’s “variantology” of media), media technologies have continued to be evaluated through the ‘well-set trap’ of the new entirely replacing, and obliterating the old (Geiger and Lampinen 2014, 335), consequently “cover[ing] up the persistence and repurposing of old ideas and materials” (Dawdy 2016, 25).

As a result, the questions with which I was constantly confronted at The Store indicated that, although available for purchase, Polaroid seemed to be considered ‘something from the past’, and whose existence, rather than reinforcing the “comforting fables about a bright future, where everything that ever existed is subjugated to the notion of technology as a power to banish fear and a ‘universal driving force’” (Zielinski 2006, 3), seemed to bring it into question.

<sup>123</sup> The relationship between Modernity and forgetting from a socio-cultural perspective was addressed by Paul Connerton in *How Modernity Forgets* (2009). For Connerton, Modernity – which corresponds to the transformation of the social fabric following capitalism – brought changes in speed and scale, separating social life from locality (2009, 6), a process that ultimately has led to forgetting.

## Material Culture and Progress

One possible way of grasping media amnesia and understanding people's reaction upon encountering media technologies that they have long forgotten, is through evolutionary anthropology<sup>124</sup>. Based on artefact studies – which attempted to “organize by measure of technological progress” (Tilley et al. 2006, 2) – evolutionary anthropology argued that “the lines of progress were clearest in the field of inventions and discoveries because certain inventions necessarily preceded others (fire before pottery, hunting before pastoralism)” (Moore 1997, 26). As Moore explains in *Visions of Culture*, Edward Tylor's evolutionary notions concluded that “a society that in the late nineteenth century used stone tools was not simply a society without metal tools, but literally a vestige of prehistory, a ‘Stone Age’ culture” (Moore 1997, 13). Likewise, this evolutionist perspective through material culture was also seen in Henry Morgan's theory of social evolution based on the technological progress of American societies (1907). In his study of the different stages of societies, Morgan proposed the division of what he called, savage, barbaric, and civilized societies based on their technological development, material inventions, and discoveries. “Mankind commenced their career at the bottom of the scale and worked their way up from savagery to civilization through the slow accumulation of experimental knowledge” (1877 in Moore 1997, 25). Though later abandoned by anthropology for functionalists and structuralist approaches, and heavily criticized by Franz Boas who argued that rather than indicating evolutionary stages, cultural practices indicated specific cultural contexts (Moore 1997, 34), Morgan's study of primitive human societies was highly influential to materialists' approaches to social relations. Engels, following Karl Marx's annotations, recognized that it was the production and exchange of commodities which defined the different societal stages and determined civilization (Engels 1902, 198). He also noted that once a society reached a certain developmental stage (in this case, of cattle raising, agriculture, and metalwork), a process that reached its height during the Industrial Revolution, it was irresistible and unstoppable (Ibid 197). It was through the development of radically improved machinery, then, that the Enlightenment's idea of history as a record of progress was developed (L. Marx 1987). It was during this time, in which progress by science and technology was seen as the driving force of society, that the notion of the ‘perfectibility of man’ first appeared

<sup>124</sup> This relationship between material culture and anthropology, which later gave rise to the evolutionary perspective, can be traced to colonialism and the desire to categorise human expressions by collecting and classifying artefacts. This period, known as ‘museum age’, “implicitly communicated the superiority of western culture” (Woodward 2007, 18).

(Ibid). In their seminal work *The Dialectics of the Enlightenment*, Adorno and Horkheimer argued that this ‘perfectibility of man’ corresponded to the supremacy of man over nature through technology (2002, 2). “For enlightenment, anything which does not conform to the standard of calculability and utility must be viewed with suspicion” (Ibid 3).

Discussing modernity, David Harvey argued that Enlightenment thought “embraced the idea of progress, and actively sought that break with history and tradition” (D. Harvey 1990, 12). According to Harvey, the Enlightenment line of thought, however, possessed a contradiction that he termed “creative destruction”, in which the new could only be created by destroying what was before (Ibid 16). One of the first critics of the Enlightenment’s dialectic – “the capacity to be represented is the measure of power, the mightiest person being the one who can be represented in the most functions, so it is also the vehicle of both progress and regression” (Horkheimer and Adorno 2002, 27) – was French poet, Charles Baudelaire. In *The Painter of the Modern Life* (1863), Baudelaire wrote about modernity, “the ephemeral, the fugitive, the contingent, the half of art whose other half is the eternal and the immutable” (Baudelaire 1995, 13) in order to depict its contradictory nature. However, it was in his unfinished project, *The Arcades Project*, that social theorist Walter Benjamin extensively problematized the notion of progress through material culture (2002, 4). For Benjamin, the decaying French arcades – described by Baudelaire during Paris ‘golden era’ – signified both the consumer dream of the nineteenth-century bourgeoisie (and capitalism), and the commodity graveyard of the twentieth century (Buck-Morss 1991, 38). Benjamin’s attention to material culture depicted in the arcades, in which “the world of industrial objects as fossils, as the trace of living history that can be read from the surfaces of the surviving objects” (Ibid 56), evidenced the passage of time (here understood as a chronology), but also the illusion of modernity’s progress, which Benjamin called *phantasmagoria*. This entanglement of time and material culture was further developed by Benjamin in his posthumously published essay, *On the Concept of History*, through the figure of Paul Klee’s *Angelus Novus*, the angel that looks into the past but is swept away by historical transformation (2003, 392). Through the figure of the *Angelus*, Benjamin critiqued modernity’s “relentless pursuit of ‘novelty’ that brings about nothing new to history” (Buck-Morss 1991, 96), and where every new ‘advancement’ was presented as a break from tradition. Accordingly, what the Paris arcades revealed through their empty shopfronts and burned-out lights was not only modernity’s dialectical truth, that of growth and destruction (Berman 1988, 15; see also Harvey 1990), but also the illusory character of ‘natural history’, the belief that history was driven by (material) progress and only moved forward.

Hence, in spite of modernity being hailed as progress, as Edgerton argues, “to reduce whole historical periods, and extraordinary historical changes to one technology, or even three, is clearly absurd” (2008, 1031). Contemporary technology historian Leo Marx notes in his critique of technological progress, that with the further development of industrialization a different sort of progress through technology started to arise. In the face of capitalism, Americans started to detach from the idea of progress as social change, with two distinct conceptions of progress: that of technology and innovation as driving social and political transformation (seen, for example, in the values of the French Revolution), and that of the ‘technocratic’ idea of progress (Ibid 37), which valued progress (seen as efficiency, rationality, standardization) as an end in itself. As a result, capitalist speed and consumerism started a process of separating human life from locality, initiating a process of structural forgetting (Connerton 2009).

### **Matter Out of Time**

Considering the association between progress and material culture, I return to people’s reactions upon seeing Polaroid cameras available for purchase. What seemed to surprise them (and sometimes even raise suspicions) was not so much the availability of the product at The Store, but its pertinence in the context of the new, that is, in the context of the high-street store as opposed to the flea market. Rather than being considered a feasible technology or a constitutive object of the present social (and material) world (Palmié and Stewart 2016, 216), at Selfridges, Polaroid was considered “matter out of time”<sup>125</sup>, that is, “matter that violates the cultural understanding of temporality” (Hamann 2008, 803). This violation or rupture<sup>126</sup> (Dawdy 2016, 31), seen in the availability of the old in the context of the present (of Polaroid cameras being sold next to newer digital ones) seemed to collapse people’s modern system of belief in which the new supplants the old. This was noted by Henning when writing about old photographic techniques being revived and reinvented, “denaturalize[ing] the relationship between an era and the technical means by which it is pictured... by offering an image of the now as past” (Henning 2007, 60), although, in this case, I argue that what was offered was the past as now. Hence, despite media historians’ attempts to challenge the evolutionary understanding of technology embedded in the tropes of ‘new’ media, the

<sup>125</sup> Building on Mary Douglas’ notion of dirt, Hamman argues in *Chronological Pollution* (2008) that as much as dirt can be considered as “matter out of place”, in which dirt is part of a system (Douglas 1966), it can also be considered as “matter out of time”.

<sup>126</sup> A rupture occurs when we have been experiencing time as a continuity and suddenly – due to disaster, war, economic collapse or personal trauma – it shatters (Dawdy 2016, 31).

destabilization produced by Polaroid indicates that media continues to be evaluated through a temporal frame that reinforces the constant characterization of technology in dialectical terms: old and new, dead and alive, obsolete and current.

“I don’t buy into this whole analogue and digital thing. For me, analogue never really went away.” Ralph told me when I asked for his thoughts on analogue ‘disappearance’. Resonating with Mr Falk’s diagnosis, Ralph felt that the constant framing of photography in terms of old or new, digital or analogue, ultimately, “alienated [people from] photographic practices.” Ralph’s account regarding the replacement of the old by the new also echoed that of Alex, for whom obsolescence and the changes brought by so-called progress were nothing more than a myth one became aware of when seeing the unchanged British landscape (see chapter 4). What my interlocutors accounts suggest, then, is that despite popular perception being informed by ‘presentism’ (Olivier 2017, 19), which “generally holds that large modern structures obliterate the traces from the past” (Dawdy 2016, 24), the new is permeated by the old (Benjamin [1982]2002; Olivier 2001; Blaising et al. 2017), and the old continues to intersect the present as active residues (Williams 1977, 122; Acland 2007).

While referring to the cultural processes that, albeit no longer dominant, continue to intersect current ones, Raymond Williams observed that,

“By ‘residual’ I mean something different from the ‘archaic’, though in practice these are often very difficult to distinguish. Any culture includes available elements of its past, but their place in the contemporary cultural process is profoundly variable. I would call the ‘archaic’ that which is wholly recognized as an element of the past, to be observed, to be examined, or even on occasion to be consciously ‘revived’, in a deliberately specializing way. What I mean by the ‘residual’ is very different. The residual, by definition, has been effectively formed in the past, but it is still active in the cultural process, not only and often not at all as an element of the past, but as an effective element of the present” (1977, 122).

With William’s words in mind, it is arguable that Polaroid practice (in this particular case study in the form of cameras) rather than being an archaic form of the past, corresponds to active residual media that continues to intersect present (and arguably, future) photographic practices exceeding the ‘temporality’ of the object (as past). This unfolding of the past into the present was something that Shannon Dawdy also noted in her study of the archaeological landscape in post-Katrina New Orleans. For Dawdy, the unearthed Mardi Gras plastic beads along with the remnants of colonial tiles, by breaking the illusion of modernity’s

chronological time had the “capacity for inducing different temporal states” (2016, 25). The objects unearthed by Dawdy, similar to the presence of Polaroid next to newer photographic technologies (seen at Selfridges), then, challenges the western chronological time conception in which time only “moves forward and accumulates progressively and irreversibly” (Palmié and Stewart 2016, 212; Benjamin 2002; Kracauer 1966).

What this temporal clash suggests, then, is that in order to understand the place Polaroid technology inhabits in today’s media photographic environment it is necessary, as Parikka notes, to “move away from a hegemonic linearity that demands that we should see time and history as straight lines that work towards improvement and something better” (2012, 12), and approach media technologies from alternative histories and chronological approaches. Even so, the potentiality of material culture to unfold a temporal experience that surpasses that of the chronological requires, on the one hand, to understand the way in which the concept of time has been approached so far; and, on the other hand, understanding the way in which materiality (and media) has the capacity to unfold multiple temporal experiences.

## **II. Theorizing Time**

The way in which the encounter with the old disrupts the illusion of chronological time (Henning 1995; Dawdy 2016) suggests that the ‘break’ with tradition that the modernist project intended to establish needs to be re-evaluated in order to approach the agency of the residual. By briefly drawing on the anthropology of time and the way that time has been conceptualized by the discipline, along with the material perspective of time brought by the field of archaeology, this section focuses on the geological concept of deep time, which the field of media archaeology has helped opened up the discussion regarding past media technologies in the present, though, as it would be argued, it has continued to fall into the ‘chronological trap’. The review of these frameworks in relation to media technologies suggests that rather than approaching the past as a foreign country (Hirsch and Stewart 2005, 264), the analysis of Polaroid’s current use and intersection with other contemporaneous photography practices needs to take into consideration the capability of media technologies to unfold multiple temporalities (Kracauer 1966).



## The Anthropology of Time

How chronology, temporality and time<sup>127</sup> is experienced in the world is not a novel ethnographic enquiry (Irvine 2014, 158), but has been widely debated in the field of anthropology (Gell 1992a; Munn 1992). The way time (as a measure of history) is perceived by different communities was first addressed by Emile Durkheim (1995 [1912]), who argued that time was embedded in social life, that is to say, it is a social construction. Evans-Pritchard (1960 [1940]) then developed the idea of time cycles, distinguishing mythical time from present time. Later, Geertz (1973) developed the idea of ‘motionless present’, a theory that was later criticized by Bloch (1977), who established that different areas of life implied different time conceptions (practical and ritual time). However, it wasn’t until 1992 when anthropologists Nancy Munn and Alfred Gell respectively published their acclaimed pieces about time. In *The Cultural Anthropology of Time*, Munn brought into question the dualistic and conflicting views of time developed by anthropology<sup>128</sup>. Munn argued that the notion of objective time (versus ‘others’ subjective time) was already a social construct and, thus, the answer to the problem of time lay in understanding different social temporalizations as opposed to time (Lucas 2014, 66). Similarly, in *The Anthropology of Time*, Gell noted that despite social time being relative, the cultural construction of time held no ‘truth’. For Gell, the study of time in anthropology required a ‘temporal ontology’ that acknowledged the impossibility of accessing the true nature of time (Hodges 2008, 403). It is through the work of Henri Bergson and Edmund Husserl<sup>129</sup>, however, that the conception of modern time starts to be redefined. For Bergson, representing time is already a paradox, “as soon as we represent time we betray it”, Lucas explains regarding Bergson’s time conception (Lucas 2014, 22). Bergson offers the concept of duration (*durée*) to argue that our time perception is a succession without distinction (Ibid). Similarly, Husserl, working in the field of phenomenology, argued that rather than being considered as a container of events, time goes into being an embodied and experienced part of the phenomenal world (1991). For Husserl, the past, present, and future represented different modes of experiencing things. With phenomenology, the discussion of time shifted towards that of archaeology, in which “time depth [was] afforded by its material record” (Irvine 2014, 164). Following Husserl’s

<sup>127</sup> Here I understand time as the successions of events through space.

<sup>128</sup> Johannes Fabian (1983) critiqued the approach to time as a linear conception, that is, from simple to complex, as a way of anthropology maintaining the hierarchical distinction with ‘the other’.

<sup>129</sup> Edmund Husserl is considered to be the founding figure of *phenomenology*. according to him, time needs to be addressed in terms of the way we experience time as opposed to the positivistic model that proposed time as a quantifiable objective measure.

phenomenology, post-processual archaeology broadens the scale of time into that of multiple temporalities, or conceptually, “temporalizations” (Shanks and Tilley 1992 in Lucas 2014). It was in this field, then, through the study of material culture, that time began to be conceived of as contextually embedded, along with the possibility of a heterogeneous time (Dawdy 2016, 29) (as opposed to a chronological time<sup>130</sup>) existing.

From phenomenology’s engagement with the sensorial world, as well archaeology’s conception of time as embedded in material culture, it became apparent that the “present-day landscape [was] not so much a collection of fragmented, fossilized landscapes of different periods but, rather, a historical process incorporating multiple temporalities which have different resonances in the present day” (Lucas 2014, 41). Lucas’ argument demonstrates that, contrary to more conventional perspectives that saw the past only as an extension of the present (following the chronological model), the “past is contemporaneous with the present” (Hölling 2017, 105); and the present is both constituted by continuity and discontinuity (Lucas 2014, 83). This capacity of the material object to carry multiple temporalities in itself (Ibid 2014, 93), required a deeper temporal awareness than the one indicated by chronology, something that archaeology, through its material record, acknowledged through the concept of deep time.

The concept of deep time is attributed to James Hutton (1726-1797), the so-called father of modern geology<sup>131</sup>. As opposed to the linear and irreversible nature of time, Hutton proposed deep time as a way of acknowledging that the earth’s geological history “has no vestige of a beginning – no prospect of an end” (1788 in Irvine 2014) but is rather comprised of cycles of decay and renewal. Thus, contrary to traditional archaeology and geology in which chronology formed the basis of time understanding, deep time saw chronology as “problematic because it represents time as uniform, linear phenomenon which has tended to define the model for historical explanation in a similar uniform, linear way” (Lucas 2014, 10).

For the purpose of this chapter, I do not wish to expand any further on the anthropological or archaeological analysis of time but to draw on archaeology and geology’s concept of deep time to problematize chronological time and the way it has affected the understanding of media technologies. As will be seen throughout this section, the concept of deep time still poses certain problematics for conceptualizing media technologies. With this argument, I do not intend to suggest that chronological time should be rejected entirely

<sup>130</sup> Cyclical time stills follow a linear chronology, albeit, a chronology that repeats itself after a certain period of time.

<sup>131</sup> See Irvine for an extended critique of this (Irvine 2014).

(Lucas 2014, 114), but that to comprehend the way the old intersects and affects our understanding of the new, it is necessary to re-evaluate the temporal dimension materiality is given.

### **Deep Time of Media**

The relation between geology's deep time as a way of ascribing time-depth through material records (Irvine 2014, 161) and media was explored by the German media theorist Siegfried Zielinski in his seminal work *The Deep Time of Media*. Drawing on Hutton's concept of deep time, Zielinski argued that media's history, as much as the earth, needed to be studied from an in-depth perspective that would stand against the 'lazy linearity' of media historical trajectories (2006). By ascribing depth to media objects, Zielinski proposed a critique to the chronological time conception that influenced the understanding of history and media from old to new, simple to complex apparatuses (consistent with Morgan's social evolutionism through material culture), noting that "ultimately nothing endures in the culture of technology" and that "in essence, such genealogies [of telematics] are comforting fables about a bright future, where everything that ever existed is subjugated to the notion of technology as a power to 'banish fear' and a 'universal driving force'" (2006, 3). Nonetheless, Zielinski's attention to deep time and its relation to media represents only a fraction of the recently founded field of media archaeology. In the hands of other media theorists, such as Jussi Parikka and Erkki Huhtamo, media archaeology suggests a multidisciplinary approach to media that aims, as much as the geological approach, to 'excavate' the past to understand the present and future (Parikka 2015). This discipline approach intends to bend the traditional history of media by focusing on alternative histories of media, or in some cases, what have been designated "zombie media" (Hertz and Parikka 2013, 13), that is, media technologies that refuse to disappear and keep coming back (through processes of tinkering and upcycling). Parikka, delving once again into the discipline of archaeology as a way of conceptualizing media's time, goes a step further and develops the concept of geology of media in order to suggest a literal (and material) understanding of deep time, where "media cultures as sedimented and layered, a fold of time and materiality where the past might be suddenly discovered anew, and the new technologies grow obsolete increasingly fast" (2015, 3). In *What is Media Archaeology?* Parikka proposes an approach to new and old media technologies through the figure of parallel lines as a way of challenging the linear progressive understanding of media. However, by doing so, he disregards the fundamental principle of parallel lines: that they never meet. Hence, despite Parikka's and other media archaeologists'

desire to rewrite the history of media by looking at the individual variations of media in order to “expand a largely ignored aspect of conventional history” (Zielinski 2006, ix), and their attempts to address ‘other’ media temporal possibilities, they continue to frame media through a chronological time conception (albeit, an unorthodox one). Thus, by choosing to focus on stratigraphy (that is, the layering of time) or parallel lines (in the case of Parikka) some voices in the field of media archaeology have continued to fall into the chronological trap where media from the past are analysed through the ‘uncovering’ and ‘digging’ of time strata – mostly as remnants or ruins of consumer culture<sup>132</sup> – and later alienated by narrations that try to suture the split (Lucas 2014, 126).

This is something that is recognized by media archaeologist Wolfgang Ernst who notes, “media archaeology is generally associated with the rediscovery of cultural and technological layers of previous media – an approach that remains on the familiar side of historical discourse” (2011, 239). He argues instead for an alternative epistemological approach to that of archaeology (as ‘digging out’) in which media themselves “become active ‘archaeologists’ of knowledge”<sup>133</sup> (Ibid). For Ernst, archaeology “belongs to the specificity of technical media [where] they reveal their essence only in their operation” (Ibid 241). Ernst’s argument regarding the need for a different epistemological approach to technical media can be said to have reached its peak (albeit a decade before) with media theorist Friedrich Kittler. For Kittler, media technologies have an ontology of their own, and with it, the capacity to manipulate the time axis (Kittler and Winthrop-Young 2017). Kittler argues that though writing has already enabled time manipulation<sup>134</sup>, it was technical media, such as gramophone and film, that allowed “reversing temporally sequenced events” (Krämer 2006, 100). According to Sybille Krämer, it was with digital media technology, that is, the computer, that Kittler’s realization of idealized history of discourse networks – distancing media from notions of the signifier and the signified and even human perception<sup>135</sup> (Ibid 104) – became possible. However, as she precisely notes, “does ‘time’ even exist without the connection to

<sup>132</sup> For example, for the form of garbology, see Rathje 1973 or dead media, see Sterling 1995.

<sup>133</sup> Ernst argues, “Media archaeology understood as an analysis of epistemological configuration (both machinic and logic) does not simply seek a redemption of forgotten or misread media of the past, nor is it confined to a reconstruction of the crude beginnings and prehistories of technical media. Rather than being a nostalgic collection of ‘dead media’ of the past, assembled in a curiosity cabinet, media archaeology is an analytical tool, a method of analyzing and presenting aspects of media that would otherwise escape the discourse of cultural history” (2011, 240).

<sup>134</sup> In order to understand the difference between textual and technical media time axis manipulation, Kittler uses Bach’s retrograde fugue, that is, the reversal of the sequence didn’t affected tonal characteristics, whereas the phonograph’s capacity to play musical numbers in reverse did (Kittler and Winthrop Young 2017, 6; Krämer 2006, 101).

<sup>135</sup> Kittler thesis in *Real Time Analysis, Time Axis Manipulation* is that “only [that which] is switchable is at all” (Kittler and Winthrop-Young 2017, 5).

observation and/or experience, also, and particularly, when one is concerned not with subjectively experienced but rather with objectively measured time?” (Krämer 2006, 104). Krämer’s critique of Kittler’s disregard for human senses by separating operational methods from use suggests that there is a phenomenological dimension from which the technical apparatus cannot be separated, as will be further shown.

The different media archaeological perspectives that have been presented in this section suggest that there is an additional temporal dimension to the study of technical media, one that distances itself from media historical analysis into a physical (inscriptive) materiality of media. However, for the purpose of my argument, and honouring the ethnographic dimension of it, rather than following this techno-materialist approach – Ernst argued that “media archaeology is more akin to the gaze of the optical scanner than to that of the anthropological observer” (2011, 249) – I propose to focus on the materiality of media while still considering the experiential and sensorial aspect of it.

### **Media Historicity**

The different film cameras that were available at Mr Cad’s photographic shop rather than presenting themselves as vestiges or ruins of the past to be interpreted in the present, as media archaeology usually does, intersect the present as active media that unwind into the current myriad of photographic and media practices. At Mr Cad the so-called ‘past’, in the form media technologies (analogue and film cameras) along with other artifacts (bags, advertising, accessories), intersect present photographic practices either in the form of new old materials, or through practices of digitization where the analogue-to-digital image acquire a life beyond the tangible material. Thus, Polaroid, as opposed to being an old or new, past or present photographic technology as the figure of parallel lines suggest, through its current material and social practice disputes the “seeming innocence of history” that draws a line between past and present (Fasolt 2005, 6), old and new. The capacity of media artefacts to encompass temporalities that extend beyond the contemporaneous time of the object challenges the western historical (“historicism”) understanding of the past as being disconnected from the present and future, an issue that according to Palmié and Stewart has impeded the ability to recognize alternative historicizing practices (2016, 210).

With this argument in mind, Mr Falk’s reaction towards my questions regarding the revival of Polaroid, namely “it was never really gone”, confirms that despite the ‘official’ history of Polaroid indicating that the technology was obsolete or approaching extinction (for example, seen in Buse’s account 2007), for Mr Falk, the history of Polaroid took a

different course. Mr Falks' ethnohistorical account indicates that, as Palmié and Stewart noted, rather than "historicism", we need a "historicity" that "describes a human situation in flow, where versions of the past and future (of persons, collectives or things) assume present form in relation to events, political needs, available cultural forms and emotional dispositions" (2005, 262). However, does the relational understanding of history (as experience) open up the possibility to explore media's temporality? And if so, how do we measure it? In addressing these questions, I explore the capacity of media to have a time of their own, and in turn, how this time can be approached.

The question of media temporality was addressed by Hörning, Ahrens, and Gerhard in their article, *Do Technologies Have Time?* By posing this question, they set out to discuss the relationship between technologies, time, and social practices, and whether it was possible to ascribe a temporal dimension exclusively to technology. Through the analysis of different case studies, they conclude that "time practices are not an expression of the temporal logic inherent in technology" (Hörning, Ahrens, and Gerhard 1999, 302), but conditioned by everyday social practices. A similar argument was made by Eggert, who, when analysing Thomas Hardy's poem, *The Self Unseeing*, noted that materiality was "the lifeline of the past. But it requires agency – a human agency – to activate it" (Eggert 2019, 68).

These arguments, similar to the one proposed by Palmié and Stewart's concept of historicity, assumes that materiality or media technologies do not possess a time of their own but that time unfolds in the experience of the practice and, like the case of Mr Falk, through its narration. In a similar endeavour, in *The Shape of Time*, George Kubler addressed the temporality of the art artefact. In his analysis, he critiques the limitations of the biographical model for defining the temporality of artefacts following the life cycle model<sup>136</sup>. "Unfortunately the tissues of history today have only one dimension that is readily measured: it is calendrical time, which permits us to arrange events one after another" (Kubler 1962, 76), he notes and argues instead for a temporal understanding that encompasses the complexity of artefacts duration, which according to him, might approach infinity (Ibid 84). For Kubler, then, artefacts have a date that might not be in agreement with the age in which

<sup>136</sup> The 'biographical model' concerning material culture was addressed by Arjun Appadurai in his seminal work *The Social Life of Things* (1986). In it, he and other authors (like Igor Kopytoff) explore commodities and how their modes of exchange (capitalism) expand beyond the economical into the cultural. In *The Metaphor of the Eye*, Roland Barthes (1982) addresses the issue of the biographical model while observing that George Bataille's *The Story of the Eye* (1928) is one of the few literary pieces that manages to convey the story of an object different from the story of the way the object passes from hand to hand. Through the notion of *wavy meaning*, Barthes proposes a story of the object that escapes that instrumentality (Pinney 2005).

the object unfolds, which is why he proposes the artefact has “manifold shapes of time”<sup>137</sup>. Kubler’s attention to age and date as two different temporal dimensions of the art object contradicts Hörning, Ahrens, and Gerhard, who consider technology’s time only unfolding through social practice, proposing instead an inherent time of the object, which is present in the case of media technologies. Without denying the relationality (social and material) of media artefacts, my argument seeks to problematize the assumption that objects are empty of meaning waiting to be filled with history, culture, etc. (Pinney 2005, 266) or, as Hörning, Ahrens, and Gerhard suggest, social practice. In view of this, the answer to measuring media’s temporality comes after realising “the number of ways for things to occupy time is probably no more unlimited than the numbers of ways in which matter occupies space” (Kubler 1962, 88), and that media time might not be contemporaneous with our own time (Pinney 2005, 264) is acknowledged.

### III. Unfolding Time



*(Fig. 37) Polaroid Image Taken with Spectra Procam, 2016*

<sup>137</sup> Kubler argues, “When we define duration by span, the lives of men and the lives of other creatures obey different durations, and the durations of cliffs, artifacts differ from those of coral reefs or chalk by occupying different systems of intervals and periods” (1962, 84).

The picture presented above (fig. 37) was taken at The Impossible Project Store with a Polaroid Spectra ProCam camera that we received as part of a special order one day. In many ways, both the camera and the image comprise many of the characteristics that I have discussed so far in relation to Polaroid: mediation, analogification, critical nostalgia, the need for an alternative infrastructure, etc. However, what makes this camera and the resulting image stand out from all the other images that I encountered during my fieldwork is the small inscription that can be read on its upper left side of the image: 87/1/1. This enigmatic sequence of numbers indicates the date the camera was originally created, 1987. This in itself doesn't seem all that new. Upon developing, analogue photographs usually had the lab date imprinted on the back of the image. Alternatively, in the case of digital photographs the date could easily be set to appear on the screen of the camera (or if printed) on top of the image, bright little numbers floating on the image surface. However, in the case of this particular Polaroid camera, whenever a new package of film was inserted, the camera's tiny screen was set to depict the date of its creation: 87/1/1. The image presented above, then, perfectly depicts the *uncontemporaneous* character of the Polaroid image. A temporal disjunction capable to *reveal* two times colliding: the media object's time, and the time where the media object unfolds.

### **Multiple Temporalities**

Shannon Lee Dawdy, while discussing the plantation structures of post Katrina New Orleans, notes how “the material stratigraphy of the city rarely tells a smooth story of progress and erasure of earlier forms” but rather speaks of “the heterotemporal experience of urban life” (2016, 24). This heterotemporal character – which establishes that linear time is a highly abstracted representation of what humans experience in flux and is based on Husserl's phenomenological approach to time (Ibid 29) – suggests that rather than a unified experience of time, “different patterns of temporal relation and experience can coexist and be explored archaeologically” (Ibid 30). Also noting the heterogeneous experience of time, though in this case related to media technologies, Hanna Hölling notes in her analysis of the conservation of Korean artist Nam June Paik's artwork that conceiving each instantiation of the work of art through linear time exposes the absence of an appropriate concept of time (Hölling 2017, 98). By drawing on Bergson's critique of global standardized quantifiable time – which “does not exist as a linear progression, marked by succession of points, that begins in the past and stretches into the future” (Ibid 101) – Hölling proposes that each instantiation of the work of art needs to be understood as a temporal rupture with the previous one (Ibid



105). For her, this temporal rupture requires that we take into account the heterotemporal character of multimedia installations, that is, the specific time of media (*time in media*) and that of the time that is imbued by them (*media's time*) (Ibid 109). This heterotemporal dimension, as Hölling notes, can be seen in many of Paik's works, like the case of the *Zen for Film* (1962-64) installation where a clear film leader runs through the projector on a loop. In the process of encountering the artwork, a diegetic time<sup>138</sup> (albeit devoid as the film is clear) emerges, as well as "a mechanical inscription of time" present in the material impressions on the film surface (Hölling 2017, 114). However, to the material time of the film and the diegetic one, an experiential one (that of the spectator who experiences the artwork) is also added.

This capacity of media technology to unfold multiple temporalities, however, was explored decades earlier by Walter Benjamin in relation to photography and film. In *The Little History of Photography* Benjamin noted that it is through the mechanics of the photographic camera that the *optical unconscious* is revealed. About this, he wrote,

"No matter how artful the photographer, no matter how carefully he posed his subject, the beholder feels an irresistible urge to search such picture for the tiny spark of contingency, of the here and now, with which reality has (so to speak) seared the subject, to find the inconspicuous spot wherein the immediacy of that long-forgotten moment the future subsists so eloquently that we, looking back, may rediscover it" (1999, 510).

Benjamin's attention to the tiny spark of contingency that the technicality of the camera unfolds, in a similar way to that of the Polaroid image presented above, confirms that the photographic media (as much as the filmic, like the case of Paik's work) has the capacity to *reveal* the 'here and now', that is, a "strange weave of space and time" (Benjamin 1999, 518). This suggests that despite Hörning, Ahrens, and Gerhard concluding that time in technology only unfolding through social practice, *Zen for Film*, and Benjamin's aura indicate that it is the technical apparatus which enables the unfolding of multiple temporal dimensions.

<sup>138</sup> In cinema, the diegesis corresponds to the internal narrative world of the film.

## Temporal Disjuncture

With the different temporal taxonomies in mind, and Kubler's attention to the different ages of the artefact, I bring the attention back to the Polaroid image presented above, in order to explore the multitemporal dimensions that the image unfolds. On the one hand, there is the chronological time in media, the calendrical dimension that the apparatus occupies in space and time: when it was first manufactured and envisioned, and its passage through time. However, on the other hand, there is also media's time, i.e., the temporal dimension that the apparatus unfolds both in terms of experience and materiality.

Taken in 2017 with a Polaroid camera manufactured in 1987, the chronological space this camera occupies corresponds to one of Polaroid's most active periods was coming to an end. This particular camera exemplifies the Corporation's attempt to expand into other photographic formats (landscape mode), along with a better quality lens, which made the Spectra highly popular in the field of forensics and dental practices. When it was originally conceived, the Spectra ProCam operated in relation to other photographic practices, mostly 35 mm analogue photography, and other Polaroid instant cameras that took the traditional square format. However, despite the camera being 32 years old, the images it currently produces do not correspond to that time, but to the current one, suggesting a rupture of the temporal continuity of the medium, which lead us to the internal time of the medium. In the image, the tension between different temporal dimensions becomes tangible through the literal date (87/1/1) engraved on the surface of the image clashing with the image time, that particular day in 2017 that was frozen in the photograph. The "clash of these temporalities" (Blaising et al. 2017) is also visible on the surface of the image where the streaks and 'flames' – due to the erratic development of the film chemistry or the malfunctioning camera rollers – suggests the age of the machine is 'incoherent' (Kracauer 1966, 77) with that of the content of the image, which is why it cannot be argued that this camera continues to produce the same images or experiences that it used to.

The temporal disjuncture observed in the case of the Polaroid image analysed above was also noted by Wolfgang Ernst, while arguing for the need for a different epistemology of technical media.

"The cultural life span of a medium is not the same as its operational life span: a radio built in Germany during the National Socialist regime (the famous *Volksempfänger*, which notoriously was used to broadcast propaganda speeches) receives radio

programs when operated today, since the stable technological infrastructure of broadcasting media is still in operation” (Ernst 2011, 240).

In both cases, then, it is possible to see how the operational dimension of the media apparatus differs to that of the content it produces and the context in which it unfolds. Additionally, Ernst’s attention to the disjuncture between the lifespan of the medium to that of the context echoes Hölling’s argument regarding the impossibility of restoring the multimedia object: “Even if it were possible to restore the object to its original condition (but it is not, as I have argued), we would not be able to restore its world, so it will always be different from ‘how’ (rather than ‘what’) it was” (2017, 98). What this argument suggests, then, is the mechanical (or electronic) nature of the technical media that produces this disjuncture, as we will further see.

But how are these heterotemporalities enabled and experienced? And what is the relationship between them? One way of approaching these questions is by following Richard Irvine, who, in observing the possibility of encountering multiple temporalities, advised that “it is not that the past comes to intrude in the present, but rather that a wider timescale becomes visible in the process of everyday activity” (2014, 167). Irvine’s phenomenological encounter with deep time is echoed by Schneider, who, upon holding a 1<sup>st</sup> century BCE Roman bone disk pondered,

“For surely, doesn’t the disk itself scream only of its own obsolescence? And yet, we might still ask, is the time of its cry (“Something’s coming!”) only past? Or, put another way, to what degree is it the past, perhaps even obsolescence, that is always the “something’s coming” brokered by media, new and otherwise?” (2018, 52).

Schneider’s striking account of her encounter with another time through the holding, touching, and weighing of the Roman disk confirms that it is in the sensorial and embodied dimensions of the object (media or otherwise) that temporality emerges, and which in the case of Polaroid can be seen through the bodily engagement that the practice requires – its handling, holding, and making. Even so, as the case of the Polaroid image demonstrates, there is an additional temporal dimension to that of the phenomenological experience of the object, one pertaining to the media object’s own time.

### ***Uncontemporaneousness of Polaroid***

“When was it gone? I’ve been here selling it for 40 years.” The words Mr Falk communicated to me that day kept coming back to me during my research, more so when I witnessed people’s disbelief in the presence of Polaroid. The endurance of the ‘past’ in the form of Polaroid cameras seen ‘in the present’, confirmed that somehow Polaroid’s present time was considered to not correlate to its chronological date, resonating with Kracauer’s disagreement with the understanding of cultural events through the modern chronological model. For Kracauer, there are two irreconcilable time conceptions: (1) the object’s own time and (2) the chronological time where the object belongs (1966, 74). As a result, any historical period is comprised of a mixture of events that emerge in their own time, creating an “incoherent mixture” (Ibid 68) in which events (or objects), despite unfolding at the same time, are not really contemporaneous. This ‘incoherence’, seen at the clash of the old with the new in Selfridges floor and through the bright numbers that linger on top of the Polaroid image, indicate the violating capacity ‘objects out of time’ hold when infiltrating and ‘polluting’ chronological of western time (Palmié and Stewart 2016, 212) – something that Benjamin identified in the interruption of illusion caused by montage (Buck-Morss 19991, 67). More importantly, they also demonstrate that “contemporaneity is the most powerful trope of homogenous empty time (which the social sciences assume) and which can be sliced crossways in order to reveal the myriad and intimate relations between everything occurring at any one given moment” (Pinney 2005, 265). Despite Pinney’s argument originally being intended to address the uncontemporaneous character of Indian chromolithographs in relation to the epoch in which they unfold, his notion strongly reverberates on the temporal dimension of media artefacts.

The capability of media technologies to unfold a temporal disjunction and inhabit an uncontemporaneous time can also be extended to that of online platforms. By drawing on Lance Strate’s concept of cybertime (a temporal alternative to cyberspace), which according to him enables a time that is reversible and recoverable<sup>139</sup>, where “past does not fade” (Strate 1995, 85), Michael C. Zalot identifies the different time experiences the e-commerce platform of eBay enables. “Because there are multiple temporal options available, buyers and sellers can in effect negotiate the time frame of the purchase through the website”, he notes regarding the synchronous and asynchronous modes of communication, the different buying options (‘buy it now’ and ‘bidding’), along with the objects displayed on the site. According

<sup>139</sup> Lance Strate argues that computer’s ‘real-time’ is similar to Mircea Eliade’s non-historical ‘sacred time’ (1995, 81).

to Zalot, all of these temporal options “contribute to the sense of a perpetual present that includes living bits of the past that can be purchased...bring[ing] the past into the current times” (2013, 24). Although Strate’s understanding of multiple temporalities enabled by cybertime can be considered to be far reaching in relation to the case studies I have presented in this chapter, indicates the way in which different media technologies have the potentiality of revealing (Benjamin 1999) and inhabiting, as Pinney suggests, the same epoch, without being each other ‘contemporaries’ (Pinney 2005, 265).

### **Conclusion: Polaroid’s Time**

By looking at the different reactions people had to Polaroid, along with the material capacity of the camera to reveal a multiplicity of temporalities that, though ‘incoherent’, inhabit the same unctemporaneous space, throughout this chapter I have tried to show the reductive nature of western time that sees the object as an empty container waiting to be filled by history, that is, a stable artefact passing through a linear history of technology, and from which Polaroid offers the “the possibility of thinking about time as something other than a method of measurement that obscures plurality” (Hölling 2017, 101). Even so, through this analysis, one question remains, one that addresses the specificity of media objects and their capacity to unfold temporalities; that is, why is it that media holds the particular capacity to reveal multiple temporalities? I believe that the answer to this question lies in what Hölling identifies as the fundamental distinction between technical apparatuses that are active to those who, due to obsolescence or decay, are deprived of their function (Ibid 122). Despite its chronological age Polaroid’s current use confirms that there is an active intersection of Polaroid in the present, as opposed to a passive one (as the case of Schneider’s Roman bone disk). Thus, as it has been argued throughout this thesis, as much as the use of Polaroid today cannot be thought of as a continuation of the original practice, these acts of repair and tinkering also cannot be thought to bring the cameras back to their original state. As a result, the heterotemporal character of Polaroid does not lie in the way it ‘lingers’ from the past as an old camera lies next to a new one, a ‘quasi-relic’ frozen in time, nor in the ‘return’ of Polaroid (which many argue corresponds to the cyclical nature of trends and fashion that came back after a few decades), but in the way that Polaroid, as a new old practice, intersects and blurs the distinction between past and present (Olivier 2001, 66). The distinction between functional objects from those that do not work anymore, then, suggests that there is a temporal dimension to the act of repairing (Houston 2017, 51), in which repair does not

'bring back' Polaroid to its previous state (as a linear time conception would argue), but enables iterations of the media object to be actualized in the present and future.

Furthermore, going back to the archaeological discussion presented at the beginning of this chapter, it is possible to argue that the time of Polaroid, or the time Polaroid evokes, is that of the palimpsest. Originally used to refer to "a type of medieval manuscript in which new text was written over previous text that had been partly erased" (Mitin 2010), the palimpsest was initially related to the notion of an static archaeological record where it referred to the "traces of multiple, overlapping activities over variable periods of time and the variable erasing of earlier traces" (Lucas 2014, 37). However, according to French archaeologist Laurent Olivier, palimpsests rather than indicating layering, suggest interweaving. For Olivier, the past is always part of the present, which is "made up of a series of past durations that makes the present multi-temporal" (Olivier 2001, 67). In a similar argument to that of Olivier, Shannon Dawdy defines the palimpsest "not with layer forever erased or covered over, but dense with potentials for echoes and continuities into the present" (2016, 30). By considering the temporal dimension of the media object through the mode of the palimpsest (as proposed by Olivier and Dawdy), the existence of Polaroid today rather than being 'incoherent' (Kracauer 1966) with the so-called 'digital age', suggests that this age does not bear in itself its temporal specificity (Olivier 2001, 63), but is made out a present that is composed out of multiple pasts, that is to say, a 'deep present' (González-Ruibal 2017). Lastly, but no less importantly, the figure of the palimpsest, understood as an accumulation of 'presents', stresses the dynamic role of the past and its ability to disrupt the western world's assumption that 'the old' simply disappears and is replaced by the new.

## Conclusion

### Media Anthropology and the Study of Obsolescence

Throughout this thesis I have brought attention to the cultural relevance of ‘obsolete’ media technologies and the way they unfold in complex media environments. I demonstrated that media are more than transmitters or producers of content, but practices that mobilize bodies, materialities, meaning, and uses, and thus need to be approached from a multifocal perspective. By focusing on the practices that unfold around media technologies, I have proposed that the relevance of ‘obsolete’ media technologies today is not so much in their past uses (as most discussions regarding ‘old’ technologies seem to suggest), but in the way their continuation indicates complex expectations towards media technologies, the western regime of presentism, the challenges brought about by processes of planned obsolescence, and the practices that practitioners set in place in order to resist them.

Furthermore, I have also demonstrated that, when it comes to analogue practices, consideration needs to be taken regarding the way analogue and digital cohabit a digitally-mediated environment, and how this cohabitation calls upon novel ways of experiencing both the analogue and the digital object. Through the exploration of these integrative practices of analogue and digital, I have revealed that media objects are not fixed but variable, muddling the understanding of the ‘digital age’ as an age that only encompasses the digital, and calling into question the category of obsolescence. By arguing that that obsolescence is not a fixed category that can be ascribed to the media object, but a transient one that can be challenged and resisted by social and material practices, I have evidenced the implications the continued use of ‘obsolete’ media has for the understanding of technology as a vehicle for progress. Finally, I have demonstrated that the use of ‘obsolete’ media technologies indicates a different temporal dimension that speaks to the media object that does not simply disappear according to a linear temporal trajectory.

With this practice-based approach in mind, I expect my research to contribute to the field of material culture and media anthropology by broadening the perspective from which these disciplines look at the media object. Likewise, I expect my research to speak to a number of other disciplines, such as media archaeology and science and technology studies, as well as cultural studies, in order to shed light on convoluted assumptions of technological progress and the mistaken idea that the future only holds ‘the digital’.

## EPILOGUE

### Continuities and Discontinuities of Media Practices

As the process of writing this thesis was coming to an end, two events that appeared to be mobilizing the ‘Polaroid world’ caught my attention. Both of them concerned the continuation and discontinuation of Polaroid practices. The first one started at the beginning of 2019 but only took off during the summer; the second one started to unfold in October 2019, and its consequences, for the time being, remain unknown.

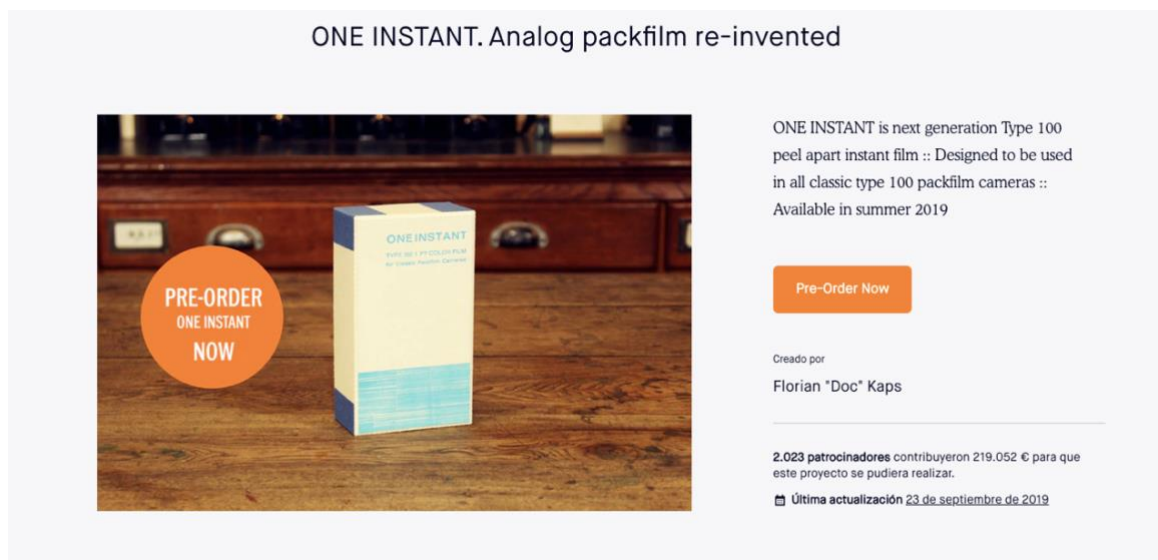
The first is that the production of pack film, the film format meant to be used with Polaroid Land cameras that was discontinued by Fujifilm in 2016 has officially been resumed. In the hands of Florian Kaps and a newly established team at Supersense, *One Instant* (the name of the new film) production finally began after a two-year process, which involved a Kickstarter campaign that followed failed meetings with Fujifilm and other independent photographic enthusiasts who had been looking into different possibilities to continue the film format. In the case of *One Instant*, seeing that Fujifilm had already scrapped the machines, Kaps and his team set out to rethink the film production, a process that was concretized with a Kickstarter campaign, *One Instant. Analog packfilm re-invented* (fig. 38). On January 4<sup>th</sup>, 2019 the campaign closed successfully with 2,023 ‘backers’ and an excess of 23% of the requested amount<sup>140</sup>. What followed the campaign were months of updates in which Supersense’s *One Instant* team kept investors informed of the stage they had reached and their following plans. On the 23<sup>rd</sup> of September of 2019, *One Instant’s* official website indicated that 1.977 (15%) of the 18.306 film cartridges promised by the campaign had been made so far. Interestingly enough, what stood out about *One Instant* was the decision to approach the film production, not from a perspective that sought to reproduce the old film, but from one that looked into alternatives ways of production following the breakdown of the original. On the website they specified:

"ONE INSTANT is NOT a CLASSIC PACKFILM but a next-generation instant film, based on a new, radical concept, not even daring to compete with the classic film legends of packfilm history, hand-made in a small manufactory together with carefully selected partners, designed to be used in ALL these thousands of legendary classic type 100 packfilm cameras out there” (Supersense 2019).

<sup>140</sup> The original campaign requested €177,777, and by the end of it, they had raised €219,052.



The words depicted on the website of *One Instant* demonstrate that this new film is not intended to replace or emulate the original pack film, that is to say, to reverse time and bring back the film format, but instead proposes a new approach for continuing the original practice. This way of securing the continuation of the practice follows the same pattern of other ‘continued’ Polaroid film formats, using the remaining supplies from the Polaroid Corporation (in this particular case positive and negative film supplied by John Reuter’s 20x24 Studio) in combination with a new reagent in order to create a new old practice. Despite the evident differences between the original FP100C film and the One Instant<sup>141</sup>, specifically, the single-shot costing €28.00 versus the original €10, the new film indicates, once again, the material and social plasticity and malleability of Polaroid practice and its capacity to challenge and resist obsolescence.



(Fig. 38) *One Instant Film Kickstarter Campaign Screenshot*<sup>142</sup>

Conversely, on Wednesday the 2<sup>nd</sup> of October of 2019, while browsing through my Facebook feed, a piece of news emerged, one that would unsettle Polaroid practitioners once again.

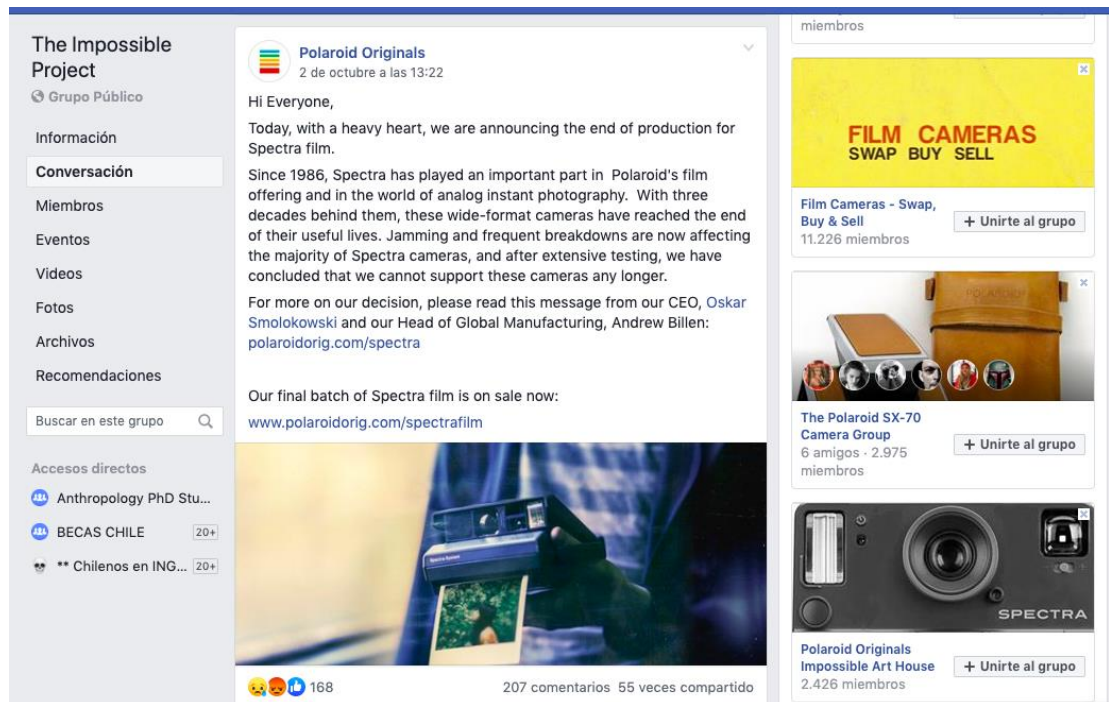
<sup>141</sup> On their website, there is a table stating the main differences between original FP100C pack film (produced by Fujifilm) and One Instant. Among them are: (1) the eco-friendly cartridge that is now made out of paper (as opposed to plastic), (2) A manual assembly line and the most important one, (3) having only 1 shot in the film cartridge as opposed to the usual 10.

<sup>142</sup> <https://www.kickstarter.com/projects/1755997589/one-instant-analog-packfilm-re-invented?lang=es>

“Hi Everyone,

Today, with a heavy heart, we are announcing the end of production for Spectra film. Since 1986, Spectra has played an important part in Polaroid’s film offering and in the world of analog instant photography. With three decades behind them, these wide-format cameras have reached the end of their useful lives. Jamming and frequent breakdowns are now affecting the majority of Spectra cameras, and after extensive testing, we have concluded that we cannot support these cameras any longer.”

The message above was posted on The Impossible Project Facebook group by Oskar Smolokowski, Polaroid Originals’ CEO, and it announced the discontinuation of the loved wide Polaroid format. Over the next few hours, the original message, posted directly to The Impossible Project group and not announced publicly on their Polaroid Originals Facebook group—thereby keeping their ‘old’ analogue formats apart from their new products—was shared over 50 times, and comments soon grew by the hundreds. As it was to be expected, soon after the announcement was posted an online petition emerged pleading with Polaroid Originals to rethink their decision to discontinue the film. The petition was shared on the main Polaroid-related Facebook groups and was joined and supported by hundreds of people posting images taken in the wide format, many times accompanied by captions such as “RIP” (fig. 39), meant to commemorate the end of an era. Alternatively, other users shared pictures of film stockpiling, while others, half-joking and half-seriously, were already planning how to adapt the Spectra cameras to other formats (mainly retouched images of the *One-Step*, Polaroid Originals’ newest camera, adapted to the Spectra format or other hybrids). Even so, the news of the discontinuation of the format was met with some ambivalence. A few practitioners felt that “it was time to accept [the discontinuation] and move forward”, suggesting that the answer to Polaroid practice wasn’t so much in the past but in the present and future technologies. However, many argued that if this were to be the path Polaroid Originals was going to follow then there was little to secure the continuation of other Polaroid film formats, such as SX-70 and 600, which were the basis of Polaroid Originals’ existence in the first place. Seeing this, some practitioners decided to write directly to Polaroid Originals seeking reassurance that the original film formats wouldn’t encounter the same fate as Spectra, a demand that was met with reassuring words from the Company.



(Fig. 39) Screenshot of *Polaroid Originals Announcement* posted on *The Impossible Project Facebook*

What can we make of these two events separated only by a few months' time? The resurgence of Polaroid pack film in the form of *One Instant* – manufactured and distributed by an informal network of practitioners moved by their desire to continue to use their cameras and this film format – suggests a resistance to the market's decision, in this case, Fujifilm, to deem the format obsolete. Conversely, the decision to discontinue Spectra film format due to, in Polaroid Original's own words, "cameras hav[ing] reached the end of their useful lives" indicated once again a unilateral decision regarding the pertinence of certain photographic formats, ironically enough, by the Company that was first envisioned to save them.

In light of these two events, I believe that *One Instant* epitomizes (albeit in a fast-paced mode) the entire process Polaroid practice has been subject to in the last decades, one of obsolescence and breakdown, resistance and repair, and the resignification of a whole practice through new materialities. Meanwhile, the decision to discontinue Spectra film format indicates the opposing forces media technologies are subject to in the face of a world that measures progress in terms of technological advancement.

Furthermore, three main conclusions can be drawn from these events. (1) Despite media analysis and the assumption that analogue practices oppose digital ones, there is no such thing as a digital/analogue divide. Although often described by practitioners as being in opposition to one another, they inhabit the same media environment and relate to one

another through the logic of supplementarity. (2) Repair acts that challenge obsolescence do not aim to restore the media artefact to its previous state, 'going back in time', but to create new ways of experience the old practice, that is, the continuation of a practice based on transformations. (3) Obsolescence is not the final stage of the media artefact, but only an instantiation of the artefact, which can be challenged and reverted through informal material and social networks. Finally, this thesis seeks to problematise the powerful forces that shape the way we conceive of media technologies, and to challenge binary distinctions of old and new, thereby bringing to the fore new models for conceptualizing technology.

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## Appendix 1

### Fieldwork Sites

#### Supersense



*Café Area*



*Master Record Recording Section*



*Vinyl Records*





*Live Recording Studio*



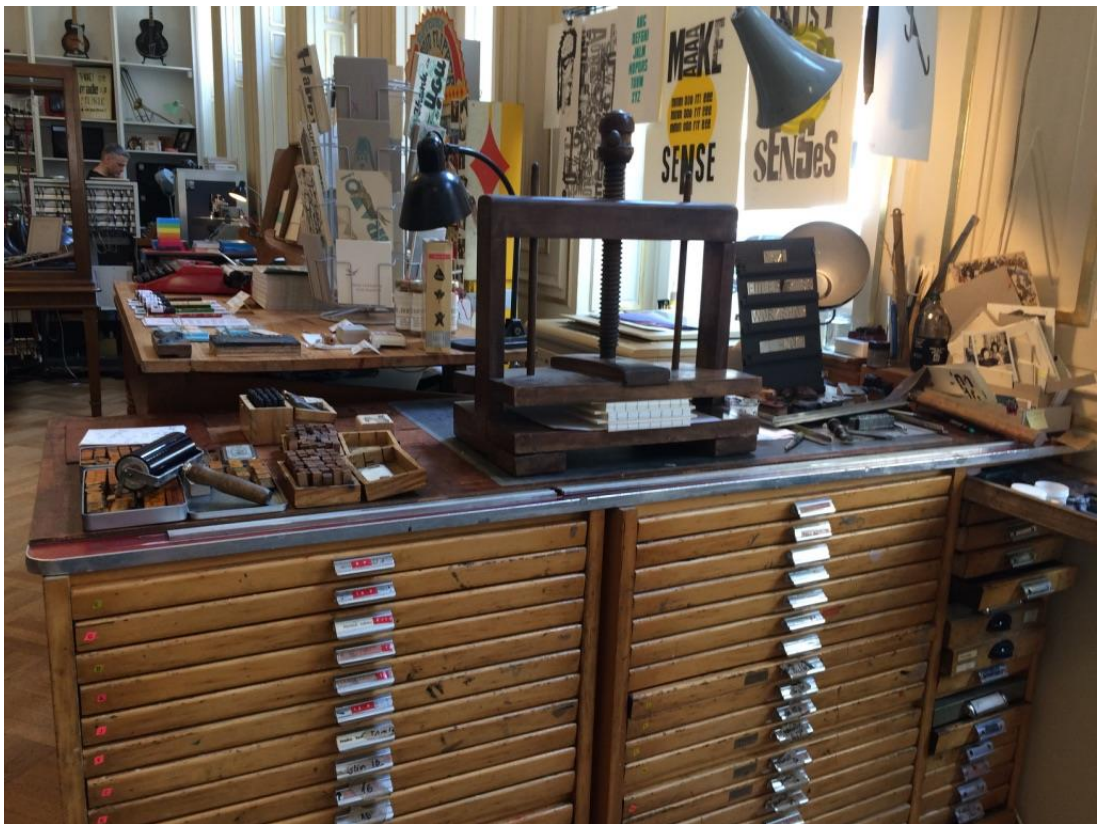
*Book Section*



*Korrex Printing Press*



*Boston Plate Press*



*Block Printing Area*



*Polaroid Cameras and Master Record Display*



*Sissel Tolaas 'Smell Memory' Section*

## Selfridges

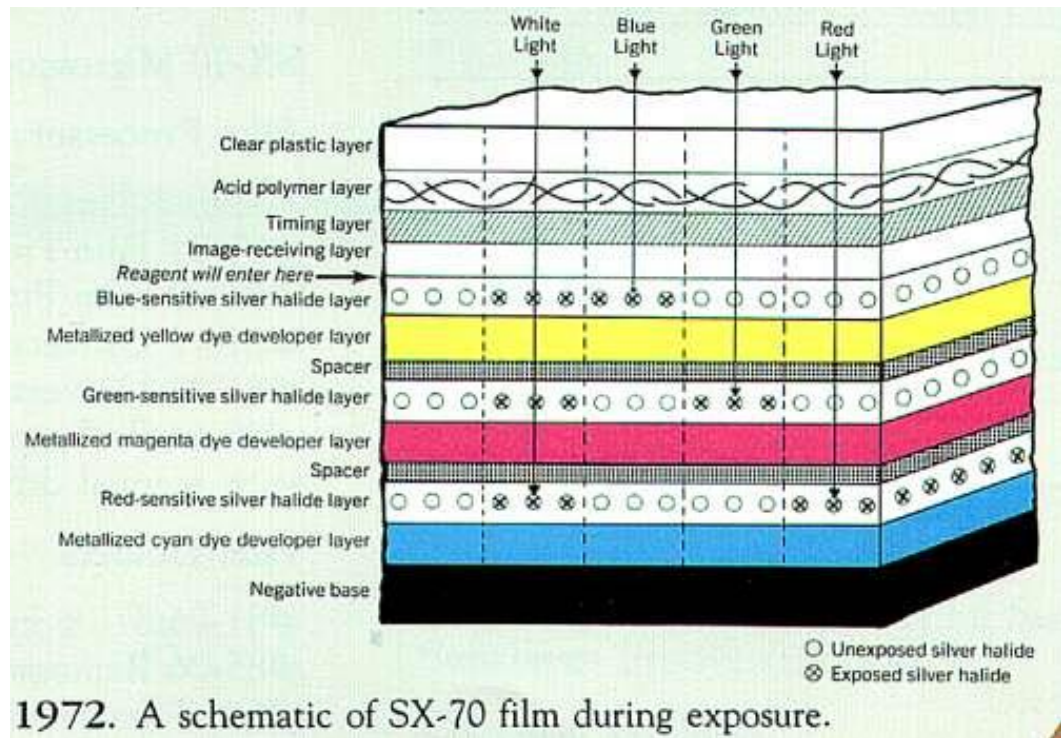


*The Impossible Project Store inside Selfridges in Technology Department*



*Display Case Detail, I-1 camera, film samples.*

## Appendix 2



*Diagram of Integral film layers, in 'Land's Polaroid' by Peter C. Wensberg, 1987*

The diagram above depicts the way Integral Film's complex chain chemical reaction works. As the image shows, the film is made of multiple layers: each one corresponding to a colour dye (blue, green, and red) that is paired up with a layer containing dye 'couplers'. Among these layers there is also a resin coated paper layer, an acid layer (to neutralize alkali in the developer), a spacer (prevents the acid coming into contact with the image), and a mordant (dye fixer) layer that forms the positive image (Adam 2017:23). The film uses a 'subtractive' process in once the chemical 'pod' (contained in the base of the film) is 'squeezed' through the camera rollers and spread over the exposed film, the system of opacifiers (light blockers) shields the light sensitive emulsion and the clear outer layer, while the other chemicals in the reagent layer move forward to the other layers to develop the image. On chemical terms, this process is explained in the following way,

“The ‘opacification layer’ is achieved by very high pH value alkali dye indicators. These are dyes that change colour as they detect alkali and acid. The indicators migrate through the film layers, eventually hitting a thin acid layer, which, in turn, reduces their pH level and renders them colourless. As the solid coloured alkalis are neutralized, the latent image that has been developing underneath ‘appears’” (Ibid 42).