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Dominici, S.

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‘Cyclo-Photographers’, Visual Modernity, and the Development of Camera Technologies, 1880s–1890s

Sara Dominici

The intertwined development of popular photography and cycling in Britain was felt so close that, in the 1880s, contemporary commentators could write of ‘cyclo-photographers’. The camera apparatus available at this time, bulky and fragile, was largely impractical to carry on a ride, and thus cyclo-photographers joined outdoor photographers in asking manufacturers for simpler and easier to operate cameras. However, a close reading of primary sources reveals that such demands were also the result of a new engagement with the possibility of seeing enabled by cycling itself. What was the cyclo-photographers’ experience of visual modernity? This article explores whether, and in what ways, the parallel emergence of a desire for compact cameras was linked to the new, and interconnected, ways of moving and seeing that the engagement with these two modern cultural technologies had made possible.

Keywords: *camera manufacturers, camera technology, compact cameras, cycling, cyclo-photographers, popular modernism, popular photography, visual modernity*

‘Amateur photography and cycling – particularly tricycling’, declared the *Amateur Photographer* in 1885, ‘are, and must always be, most intimate associates’.¹ Why that should have been the case, considering the challenges of carrying heavy and fragile

glass-plate cameras on likewise heavy and laborious to ride machines, the magazine was ready to explain:

The health-giving pastime and the capability of visiting great areas of country at small expense of muscle and money, are desiderata which must make every amateur photographer long to be a cyclist. On the other hand, the fine and lovely views which the cyclist has constantly presented to his gaze as he rapidly travels from country to country must make him long to be a photographer, able to permanently record some of his most happy experiences and sights.²

For the *Amateur Photographer*, which had launched just over five months earlier with the aim of supporting a growing body of non-professional photographers, the advantages that cycling promised outdid its drawbacks: it improved one's wellbeing, it gave control over one's mobility, it brought within one's reach a wider choice of destinations and, above all for amateur photographers, of subjects to photograph. Indeed, the illustration that the *Amateur Photographer* chose for the front cover of its bounded volumes between 1884 and at least 1887 – a couple riding a tricycle by a shore at sunrise, or possibly sunset, next to a plate camera mounted on a tripod (figure 1) – brought all these elements together. What the *Amateur Photographer* encouraged, however, was no small feat: at this time typical camera equipment would have included the camera body itself plus a number of loose parts such as a lens (or lenses), shutter, double dark slides holding two glass plates each, tripod and focussing cloth. John Browning, treasurer of the London Tricycle Club, estimated that, depending on the size of plates used, the whole apparatus would have weighed between 10 to 50 pounds (about 4 ½ to 22 ½ kilograms);³ had a photographer chosen to carry developing equipment and extra plates too, the weight would have rocketed

to about 70 pounds (almost 32 kilograms).⁴ Carrying all of this on a bicycle was practically unfeasible, and thus the popularity of the tricycle, whose luggage-carrying capabilities meant that photographers and tourists in general could avail themselves of that mobility and independence that, as the *Amateur Photographer* recognised, cycling promised.

Figure 1 about here, full page size with caption below the figure. No other text on this page other than caption. Should be on page 3 of the proofs.

Cycle technology itself was also just becoming safer and easier to use, and thus suitable for the requirements of photographers. The ‘safety’ bicycle, which contrary to earlier bicycles such as the ‘ordinary’ (or penny-farthing) and the boneshaker (or velocipede) had two same-size wheels, a chain-driven rear wheel and a diamond frame, entered the market in 1885.⁵ Together with the pneumatic tyre, patented in 1888,⁶ the safety bicycle contributed to popularising cycling by making it a more comfortable experience – although a ‘bicycle boom’ had to wait to the mid-1890s for further improvements in cycle technology, and for the growth of the cycle industry and of a second-hand market.⁷ Up until this point, then, cycling generally meant taking heavy machines on bumpy rides caused by poor road conditions, and enduring vibrations that hard-rubber tyres could not absorb – far from ideal when carrying camera equipment. Additionally, as the press from this period suggests, deadly crashes or accidents involving the breaking of arms or other bones were common.

These introductory notes indicate, then, that in this period cycling and taking photographs outdoors, let alone cycling with a camera, were clearly considerably demanding activities. Yet, ‘the wedding of art and athletics’,⁸ as one commentator in 1885 described the relation between photography and cycling, caught the imagination of many amongst both photographers and cyclists who, undeterred by the difficulties

encountered, began to describe themselves as ‘cyclo-photographers’. In doing so, they joined many other (outdoor) photographers in asking camera manufacturers to develop apparatuses more suitable for their needs. The introduction into the market of dry plates in the 1870s – coated glass plates that, differently from the wet collodion process, could be prepared beforehand and stored until exposure – had done much to simplify the process of taking photographs, encouraging the carrying of cameras out of the studio. At the same time, however, the weight of the camera kit was still limiting, and photographers had also begun asking for lighter and more portable cameras. The roll holder carrying negative paper patented by George Eastman in 1884, which in 1888 was incorporated directly into a camera (the Kodak), was a response to this market demand: by the mid-1890s, smaller cameras holding roll films (often with a changing back to hold glass plates too) had entered the market.⁹

Nonetheless, until the second half of the 1890s the sensitivity of dry films was still relatively low, so glass plates continued to be preferred by many for their clear definition and sensitiveness. As we will see, the demands for lighter and readily accessible cameras, and for more sensitive emulsions, that cyclo-photographers advanced can thus be understood as part of this push for the simplification and versatility of camera technology. Yet cyclo-photographers’ particular conditions of use of the camera, together with the possibilities of *seeing* that cycling familiarised them with, suggest that we should also consider the role that new forms of visualisation had in the development of compact cameras.

The experience of cyclo-photographers points to a reading of the origins of popular photography as driven not just by market demand for portable cameras, but also by a transformed approach to *seeing* itself – one that can be understood, as we will see, within the context of that ‘extension of the visible’ that impacted society from the

second-half of the nineteenth century.¹⁰ In order to explore this tension between market demands and broader shifts in the visual culture of this period, in what follows I use *demand* to refer to those more explicit requests that cyclo-photographers made to camera manufacturers, and *desire* to think instead about an implicit urge to engage with new ways of seeing, complexly related to the experience of visual modernity itself. This desire could be thought of similarly to that ‘desire to photograph’ that Geoffrey Batchen links to the conception of photography, and which he argues ‘only appears as a regular discourse at a particular time and place’.¹¹ Likewise, I argue that the desire of cyclo-photographers was a product of the epoch within which they operated, and that the demand for new technological developments could be seen to reflect the materialisation of such desire.

In this essay I thus explore the significance that the fusion of the two modern cultural technologies of cycling and photography had for an understanding of visual modernity, exploring specifically the new, and interconnected, ways of moving and seeing that cyclo-photographers experienced, and how this influenced the development of camera technology and its uses from the late nineteenth century. The aim of this investigation is that of examining people’s engagement with particular visual and photographic practices, and how these shaped modern subjectivities. Consequently, cyclo-photography is not discussed as a defined photographic style or subject matter, but as the lived experience of cyclo-photographers. (Because the photographs taken by cyclo-photographers are beyond the aim of my enquiry, figures are almost entirely absent in what follows.) I start by discussing the role and cultural significance of cycle and camera in this period, and what the choice of the term ‘cyclo-photographer’ suggests about contemporary understandings of the crucial link between these two technologies, and therefore, its relationship with the possibilities of

visualisation opened up by cycling as these were described at the time. I then follow cyclo-photographers in their attempts to use glass-plate cameras, considering the technical issues they faced and, consequently, what they asked of camera manufacturers. As this will hopefully show, the growing demand for cameras that were readily accessible and quick to set up, and for more sensitive plates and then films, was rooted in the experience of visual modernity itself.

'Cyclo-Photographers': Agents of Visual Modernity

The use of the term 'cyclo-photographer', and of the practice of 'cyclo-photography', began to appear in the photographic and cycling press in Britain in the mid-1880s, and was used with increasing frequency until at least the early 1910s.¹² Although the term 'cyclo-photographer' was deployed in a way that apparently transcended divisions of class, the class of people that this term embraced actually changed considerably during this period: until the end of the 1890s, both cycling and photography remained rather expensive activities, generally only accessible to the middle and upper classes. In this period cycling provided a form of leisure that was considered respectable, while also signifying one's socio-economic status¹³ – an assessment that can also be extended to photography.¹⁴ This changed at the turn of the century, when the arrival of the motor car, the introduction on the market of cheaper cameras such as the Kodak Brownie,¹⁵ and sharp reductions in the price of bicycles,¹⁶ expanded further the pool of users and began transforming the social currency of both activities within a popular domain.¹⁷

During the period with which this article is concerned, then, cyclo-photographers were primarily those well-off urban dwellers who travelled home and abroad, for daily runs or longer journeys, and took a camera along. While the term 'cyclo-

photographer' did not distinguish the reasons why people combined camera and cycle, the many editorials, articles, and correspondence on photography and cycling published in this period – the growing number of which is in itself a testament to the popularity of these two activities – show that the reasons were various, and that they often overlapped. For example, those who contributed to the photographic survey movement, active between 1885 and 1918 with the aim of recording English heritage,¹⁸ saw in cycling an efficient way of surveying the country;¹⁹ using the cycle to reach more destinations was also the goal of those who wished to add to their stock of negatives in preparation for the exhibitions and lantern shows taking place in the winter months; for many others, the camera allowed them to preserve a memento of an experience that the contemporary press almost unanimously described very positively.

For cyclo-photographers, as for cyclists more generally, control over the means of locomotion meant access to a new kind of freedom. As has been amply discussed elsewhere, the bicycle influenced significantly late nineteenth-century society: it transformed locomotion by reducing travel costs and increasing mobility, and also shaped people's experience of space by enabling individuals to move across distances with an unprecedented freedom. This was further enhanced by the sense of self-autonomy that came with controlling the vehicle.²⁰ On the whole the bicycle was regarded as a truly modern technology, a cultural asset, we could say, to the 'battle for the modern',²¹ as Matei Calinescu describes it, fought for by the middle classes in this period. 'The doctrine of progress, the confidence in the beneficial possibilities of science and technology, the concern with time [...] but also the orientation towards pragmatism and the cult of action and success'²² that, Calinescu argues, were considered key aspects of the modernising project of the middle classes, had a

profound influence on the social and cultural life of those living in growing urban centres such as London, Manchester, Birmingham, and Leeds, defining attitudes towards social practices concerning, for example, education, leisure, health, and work life.²³ This also influenced modern subjectivities (particularly of the bourgeois subject who was gaining self-determination) of which, as we will see, cyclo-photographers are exemplary. A special role was allocated to culture, which came to be considered ‘a significant – if not indispensable – part of what it meant to be “middle class”’ in this period.²⁴ Cultural practices such as cycling thus provided social recognition and the sense of being part of this modern project.

However, if on the one hand cycling gave to the middle classes a means of asserting social conformity, on the other it also allowed them to free themselves from the constrictions that society imposed upon them (something that was particularly the case for middle-class women). In other words, it was a cultural practice that, although the product of rationalised forms of techno-science, promised an escape from, and transcendence of, a particular social order and modern rationalisation itself.²⁵ The independence that this mobile technology thus afforded was normally celebrated as an escape from the rationalisation of modern life and its routines, a way to regenerate oneself in mind and body. Simultaneously, cycle users placed themselves within the social order by distinguishing themselves from those using other modes of transportation perceived as inferior.²⁶ In this vein, the cycling press of the period described cycling as a liberating and exclusive device. Already in 1878, writing about cycling during the holiday season, *Cycling* commented: ‘It is seldom a question with the bicyclist as to what he shall do during his respite from work, but rather, of where he shall go’. A cyclist, the magazine continued, ‘at his own sweet will go[es] wheresoever and whensoever he pleases’.²⁷ ‘One of the greatest pleasures of cycling’,

the same magazine affirmed the following year, 'is that a rider can choose a variety of routes to reach his destination, and be quite independent of the railways'.²⁸ A letter published in the Cyclists' Touring Club Gazette in 1886 on 'the chief objects of touring' – 'the recreation of mind and body, and restoration of jaded health' – recommended 'dwellers in cities' to practise cycling as follows: 'Early to bed and early to rise; avoid large towns, railway routes, and manufacturing districts if you value kindly and hospitable treatment; pass a long day in the open air and in moderate exertion, varied by rest, if you wish to sleep well and enjoy life'.²⁹ 'Cycling', the same journal stated a few years later 'has given dwellers in cities increased opportunities of breathing fresher air, and of wandering over country roads'.³⁰ This sense of liberation was such that cycling was often compared with flying: 'It is not uncommon for the cyclist [...] to remark', James Means wrote in 1896, 'Wheeling is just like flying!'³¹

The celebration of mobile independence and freedom from timetables and city life more generally were shared by cyclo-photographers. 'My tricycle', wrote 'One of Them' in a letter to the *Amateur Photographer* in 1884, is 'a faithful, untiring ally, always ready to bear me and my photographic paraphernalia "far from the madding crowd"'.³² By cycling, Griffin similarly commented in 1885, 'one becomes gloriously independent of return tickets and the limited field of operation which is generally entailed by a train journey'.³³ As cycle and camera technologies improved, articles recommending escaping 'crowds' increased: cyclists and photographers, Stein and Varden wrote in 1893, 'generally prefer to get away as far as they can from the beaten tracks and crowds to carry out the same; and here is the great advantage of the cyclist-photographer, for he can, without expense, leave the railways, with their crowd of pleasure-seekers, behind, and in quiet spots and restful places enjoy himself'.³⁴ Or, as

the *Amateur Photographer* put it in 1896, ‘Thanks to the magic wheel and the modern magazine cameras, amateur photographers may now go far afield in search of the picturesque, independently of railways and such-like abominations’.³⁵

The bicycle, of course, was not the only means of locomotion available to photographers (or anyone else). Sailing boats, steam ships, the railway and horse-drawn vehicles had long carried photographers around.³⁶ What made cycling distinct, however, was that for the first time one could control completely when and where to stop: this was a relatively solitary mode of transport that, contrary to the one offered by the railway or the omnibus, allowed preserving a bourgeois and individualist experience of travel and leisure and in doing so avoiding becoming part of the ‘mass’ culture of a ‘crowd of pleasure-seekers’. Mobile independence thus meant that, by pacing the journey according to one’s own needs and desires, one felt in control of one’s own experiences – including photographic ones. Reporting in 1884 ‘On a Sociable Tricycle with a Camera in North Wales’, for example, Leake and Marret concluded that ‘We found the tricycle an excellent means of getting about, and having only ourselves to please, could stop or go on to suit our own convenience’.³⁷ This was also Smith’s assessment, who similarly remarked that thanks to ‘means of locomotion [that] are self-contained and self-controlled’, a cyclo-photographer can ‘go where he likes, and stop where he sees that a good view is obtainable’.³⁸ Such an opinion was widely shared by cyclo-photographers: once on a bicycle (or tricycle), commentators routinely claimed, the cyclo-photographer could ‘give rein to fancy’,³⁹ ‘roam hither and thither at the dictates of his own sweet will in search of pictures’,⁴⁰ and ‘stop anywhere, and at any moment, acting to the rider’s desire’.⁴¹ This confidence is similarly reflected in the way in which the ‘intimate connection’⁴² between camera and cycle was described, which in the majority of cases was in terms of a personal

relationship: an ‘affinity’, an ‘alliance’, a ‘wedding’, a ‘marriage’, a ‘nuptial’.⁴³ While the prose of the time, which was often infused with sentimentality,⁴⁴ might have influenced how cycling with a camera could be described, it seems that the choice of words used also reflects more than the recognition that one could happily bring together the means of locomotion and representation: rather, it suggests that the combined use of these two technologies was understood as producing a new *experience*. Specifically, ‘cyclo-photography’ came to signify a new mode of engaging with vision and mobility as such.

Let us take, for example, an extract that was published in 1885 in the magazine *Wheel World*. Commenting on how ‘cycling with amateur photography is now wed in earnest’, Woll, the author, observed:

No sport or pastime, as such, contains so many manipulators of cameras and chemicals; and certainly no sport lends itself to the pursuit so readily and comfortably as does cycling. [...] A cricketer or foot-baller may be an amateur photographer, but he is not a cricketing or footballing photographer, and his particular athletic hobby helps him but little in the art; whereas cycling itself creates subjects innumerable without speaking of scenery and landscape work.⁴⁵

The spreading of the term cyclo-photographer, in this sense, points to more than the recognition that tricycles, and later bicycles, could help carry cameras, or that one could travel further afield and in this way increase the chances of finding good photographic subjects. Instead, the contraction of the name of these two different technologies, or ways of using these technologies, into *one* experience – cyclo-photography as the experience of the cyclo-photographers – expresses a new way of seeing and moving or, to be more accurate, of seeing *while* moving. In this light,

Woll's comment implies that the difference between a cyclo-photographer and a 'cricketing or footballing photographer' was in that the 'innumerable subjects' that 'cycling itself creates' had to do not simply with what one could see (and thus photograph) while on a ride, but, most importantly, with the individual experience of the cyclo-photographer, whose subjective engagement with the environment within which one moved and looked was now transformed. In other words, by virtue of speed, cycle technology made it possible not only to see more things, but to see things *differently*. This was a new way of looking at the world: a moving gaze.

The speed at which cyclists rode, which was significantly faster than walking but not as fast as travelling by train, meant that the landscape and its elements appeared not as an unclear blur, but as a collection of 'bits' that cyclists encountered in fast sequence. It is striking, in this respect, to notice how cyclo-photographers' recollections of their visual experiences are reminiscent of (or anticipate) the cinematic montage of the early twentieth century, especially the way in which scenes were experienced as 'cut'. This is for example the case in the account 'Among the Alps with Cycle and Camera' written by R. McGahey for the *Amateur Photographer* in 1898, which thus describes the progression of views encountered:

After about twelve miles we left the valley, and ascending by what is reputed to be a Roman road, views of striking grandeur gradually unfolded through pine woods, over bridges disclosing magnificent vistas of snow-clad mountains, gorges, waterfalls, rustic chalets, and mills in ever-varying combinations – now riding along a road cut in the side of the mountain – now diving into the darkness of a winding tunnel, to find ourselves in another valley hitherto unsuspected. Every mile opened up new views that seemed to excel anything we had previous seen.⁴⁶

The fast pace of the text, which seems to want to parallel the pace of riding, lists with equal rapidity the ‘views’ encountered, presenting them as isolated elements that the author assembled together in recollecting this experience. Many contemporary accounts similarly described this quick and momentary encounter with objects, people or sights in terms of ‘fleeting glimpses’;⁴⁷ of catching ‘a glimpse of a sweetly pretty scene’;⁴⁸ ‘the many pleasant glimpses of rural life’⁴⁹ or ‘many a glimpse of tree and heather’⁵⁰; of ‘let[ting] the machine have a free head and leave you to admire the flying panorama’;⁵¹ and of ‘the prospective delights of [looking at] a long fleeting, flying coast downhill’.⁵² This was not akin to the gaze of a *flâneur* who goes botanizing on the asphalt’;⁵³ the random wandering of a mobile gaze that lacks focus in its encounter with the kaleidoscopic and fractured experience of modernity or, in the words of Charles Baudelaire (as the first to define *modernité* in something like its contemporary sense) with ‘the ephemeral, the fugitive, the contingent, the half of art whose other half is the eternal and immutable’.⁵⁴ Instead, as the extracts reviewed at the beginning of this section indicate, such visual encounters were understood as depending upon one’s own choices, and thus created by the individual themselves. While an element of contingency might also have been present in the mind of the cyclo-photographers (as the *flâneur*, by contrast, might have felt in control of their wandering), the felt experience was one of empowerment. In other words, cyclo-photographers felt in charge of this modern way of seeing, understanding it as an exercise of freedom and independence.

As film historian Jean-Louis Comolli has commented, ‘[t]he second-half of the nineteenth century lives in a sort of frenzy of the visible’;⁵⁵ a multiplication of (commodified) visual stimuli that has been discussed as transforming the social relations and activities of modernity.⁵⁶ For cyclo-photographers, however, this sense

of visual impermanence, a transitory and fleeting experience of both time and space that we recognise as a distinctive feature of modernity, was experienced as something the individual could be in control of, rather than passively subjected to. Specifically, the argument here is that the *fleeting* experience of modern life was both a reason why the practice of carrying a camera on wheels crystallised in the figure of the cyclo-photographer, and a mode of engaging with time and space that cyclo-photographers made their own in order – or, at least, this was the promise – to negotiate modern life in the first place. This was a transition to a new order of seeing and being that can thus be appreciated in the adoption of the term itself. As Patrick Maynard has powerfully argued, thinking of photography as ‘a kind of technology’, ‘a technological way of *doing* things’,⁵⁷ helps us move beyond an understanding of photography as a representational tool – an approach that has dominated, albeit with important exceptions, photographic studies – and consider instead the significance that photography as a tool has had within society. A key question that he asks – ‘Which of our powers does photo-technology amplify?’⁵⁸ – is thus absolutely relevant to think about the experience of cyclo-photographers, insofar as one ‘power’ that photographic technology in combination with the cycle amplified was indeed vision. When riding, people did not only get to see more things, but to see them *differently*. For the cyclo-photographers, then, if modern life was fleeting that was because *they* were moving: in other words, by enhancing one’s sense of space and vision, the technology of cyclo-photography reversed the roles between the individual and the (visual) stimuli of modern life, with the former now the creator herself of such stimuli. As such, the suggestion here is that the term cyclo-photography reflected a modern engagement with cultural technologies of vision and mobility, an experience that saw the individual placed in a new position to negotiate the social and cultural

transformations brought about by modern life. It indicates an embracing, on the one hand, of that autonomy that modernity made possible, for instance in relation to personal mobility and representation, and the rejection, on the other hand, of those processes of standardisation and uniformity that modernity also produced, and that threatened to dissolve the individual within the crowd.

While this mode of seeing was, of course, not a prerogative of photographers alone amongst cyclists, it had a particular significance for photographers as it fostered a desire for a camera apparatus through which one could engage with this modern vision. In short, the desire to master this moving gaze was reflected in the demand for new technological developments. In the words of contemporary commentators: the appeal of photography to a cyclist, wrote the *Cyclist* in 1879, is in the desire ‘to fix those fleeting aspects of natural scenery which strike the eye upon a tour or a ramble’;⁵⁹ ‘Would that the sensitive plate were “quick” enough to fix so fleeting an image as this!’,⁶⁰ exclaimed H. H. Dore in 1885, reporting on the sights he met on his trip to the Isle of Man; ‘I think that there is too much striving after *speed* now a day. “Give us a faster lens – a faster plate – a faster cycle,” that’s all the cry’,⁶¹ recognised a correspondent to the *C.T.C. Monthly Gazette & Official Record* in 1887. Yet, the technology available at the time was far from suitable for photographing the many ‘bits’ encountered while cycling, with the same freedom and the same pace at which one saw them: a different control over the camera was needed.

New Technological Demands

In 1879, reviewing the ‘Scenograph’ camera,⁶² *Cycling* commented that ‘The association of cycling and photography has been hampered hitherto by the weight of material’, but that “‘The Scenograph” has reduced the difficulty to a minimum’.⁶³

Thanks to the dry plate process, the author continued, ‘No dark house or paraphernalia is required’ and ‘The cyclist can go on a tour, taking with him a dozen plates, and he does not need to touch one of them with chemicals after taking the view, until he returns home again’.⁶⁴ This was certainly an improvement from the requirements of the wet collodion process, but it could scarcely be described as the ideal solution to the demands of cyclo-photographers who, as seen, had discovered a new kind of freedom in mobility as well as visuality. As they were clear in articulating, what they wanted was, on the one hand, a photographic equipment that, in keeping with the pace of cycling, could be readily accessible and quick to set up, and on the other, glass plates, then films, sensitive and reliable enough in order to be used readily when the cyclo-photographer wished to capture an interesting ‘bit’.

The first demand – for light, compact, portable and accessible cameras – was shared with the majority of photographers who operated out of the studio. For the cyclo-photographers, however, the weight and complexity of the apparatus had an added significance in that it stood in striking opposition to the thrill of ‘flying’ on wheels and the related desire to capture those glimpses caught when riding: in other words, bulky cameras presented an obstacle to maintaining the sense of freedom and spontaneity experienced when cycling. For example, just unpacking the camera apparatus, as the following letter published in the *Amateur Photographer* in 1885 shows, was a far from straightforward process:

In practising photography from a tricycle, one of the essentials is that the camera and dark slides should be placed as to be readily accessible in a moment [...]. Then, too, when it is desired to stop and take a view, there is generally some few minutes occupied in rummaging in the bag for the various etceteras. First the camera, then the lens, which has to be screwed into the

flange, then the lens cap is missing, and is only found at last at the bottom of the bag, after turning out the whole contents, to the disarrangement of all order in the sequence of the plate carriers; then the camera has to be opened out, and adjusted prior to focussing, in short, there is so much to be done. In fact, many good views are passed by simply because so much time is lost over each, and because of the trouble involved.⁶⁵

The manoeuvres required for adjusting and focussing, which the correspondent only briefly mentions, were also time consuming. A typical description of these passages is offered by Henry Sturmev, the editor of *Cycling*, who, writing in 1887 on 'Photography for Cyclists', advised on 'Taking the Photography' as follows:

Provided now with his apparatus and plenty of ammunition in the shape of double-backs filled with sensitive plates, our cyclo-photographer sallies forth to conquer Nature – if he can. Arrived at an object he is desirous of 'taking,' he sets up his tripod, attaches the camera and lens to the top, places one leg of the tripod beneath the lens and the other two below the rear corners of the camera, gets the whole level, puts the cloth over his head and the camera, removes the cap of the lens, looks at the ground glass at the back, and winds away at the focussing screw until the view – which will show upside down – appears sharp and clear. He will then move the camera slightly, till the view on the ground glass is exactly what he wants there, focus again, and if he finds that, although the centre of the view is sharp and clear the edges are hazy, he must take one of the flat pieces of metal with holes in them, which are supplied in a case with each lens, and slip it into the slit which he will see in the barrel of the lens. [...] If the lens used is so fitted this plate must be turned round so as to bring another hole in the middle of the lens. A large stop must be tried first, and if, on looking at the view again, the edges are still blurred, a smaller one, and so on until the whole of the view is *just* sharp. The cap must then be placed on the lens, the focussing glass removed or turned back, and one of the double backs inserted in the grooves at the back of the camera, the slide nearest the camera

withdrawn to its full extent, the cap removed and the exposure made, replaced the slide once more pushed in and the double-back withdrawn, not to be re-opened until once more within the dark-room.⁶⁶

There is ample evidence to indicate that the weight of the equipment, its many components (loose camera parts also often meant *lost* parts) and the time required for setting up the camera, were considered a bother by the vast majority of cyclo-photographers. For example: ‘The camera should have no loose parts or screws’, wrote the *C.T.C. Monthly Gazette & Official Record* in 1887, ‘so as to be easily and quickly set up and repacked, and the weight, including double backs and lens, not over three pounds or so’.⁶⁷ ‘In cycling’, wrote a correspondent to the *C.T.C. Monthly Gazette & Official Record* in 1888, ‘when a camera has to be unpacked, fixed up, and then re-packed again, perhaps, six, eight, or more times a day, much time is spent in this alone, therefore the motions of opening and closing should be as simple as possible, and there should be no loose parts’.⁶⁸ Similarly, another asked the readers of the *Amateur Photographer* for advice as to a camera that ‘should be light, have reversing back to take pictures horizontally and vertically, have few loose parts, and be easily and rapidly rigged up’.⁶⁹ These requests continued through the 1890s: the ideal camera, wrote a correspondent in 1895, should ‘be easily and quickly detachable for use, and yet not to be in the way of the rider’;⁷⁰ ‘as the camera will be wanted many times a day’, wrote Fry to the readers of *Cycle and Motor World* in 1897, ‘it will be best to place the photographic apparatus where it is most accessible’;⁷¹ ‘What do I think the best form of camera for the cyclist?’ asked Welford that same year – ‘I prefer one which is in perfect readiness for use’.⁷² ‘The Ideal Camera for Cyclists’, judged the *Amateur Photographer* in 1898, ‘should be [...] light in weight [...] have] as few loose parts as possible, for with a multiplicity of screws and nuts there is the

danger of one small part being mislaid [... and] ought to pack up into a small space, so that it may be carried with ease upon the cycle'.⁷³

One particular issue with the equipment on the market at this time was that this used glass plates: this material weighted down the whole apparatus, was extremely fragile, and limited what could be photographed – both because the weight meant that only a limited number of plates could be carried on a ride, and because exposures were still not short enough to allow cyclo-photographers to hold the cameras with their hands and thus do without the tripod, another bulky component of the camera equipment. Contemporary commentators routinely complained that glass was easily broken or damaged as a result of the vehicle's vibration, which caused the plates to rattle and the dust thus created to form pinholes on their sensitive surface: 'The great bugbear in cycling with photographic apparatus was dust', Henry Sturmeay was reported saying in 1890, 'especially that caused by the jolting of the plates in the slides'.⁷⁴ Likewise, 'The risk of fracturing plates and getting dust spots', wrote Arthur W. Green to the *Amateur Photographer* in 1898, 'I think are the worst enemies to cyclo-photographers'.⁷⁵ The fact that cyclo-photographers could not feasibly carry more than a dozen glass plates was also considered an impediment. As noted in a letter published in 1891, 'I intend this year to combine cycling and photography. I ride a safety and assume that it is practically impossible when on a tour to carry, owing to weight, a sufficient number of glass plates to collect a large series of views'.⁷⁶

Unsurprisingly, cyclo-photographers were great supporters and some of the earliest adopters of paper negatives and film rolls. Although exposure time was still relatively low, and results often unreliable, this material presented obvious advantages: as the *Amateur Photographer* wrote in relation to George Eastman's newly introduced films,

‘Glass is bulky, heavy, breakable. Films are compact, light, tough, flexible’.⁷⁷ So, for example, in 1887 Ernest R. Shipton, the Secretary of the Cycling Touring Club and also a photographer, wrote in a paper delivered to the Camera Club in London (and subsequently published both in the *C.T.C. Monthly Gazette & Official Record* and in the *Amateur Photographer*) that ‘I need hardly say upon the question of films, as opposed to plates, there can, *caeteris paribus*, be no doubt whatever that the former are to be preferred’.⁷⁸ Henry Sturmeley similarly commented that year that ‘To the tourist compactness and lightness is everything, and for this purpose “paper” will very largely supplant glass in the near future’.⁷⁹ Additionally, he continued, ‘If paper is used, two or three hundred can be carried in the camera case; but if glass it will be advisable to pack them in a box by themselves and send on by train from town to town if any quantity are being taken’.⁸⁰ ‘The necessary number of dry plates was an encumbrance to be avoided’, wrote Fry reporting of a tour he took in 1896: ‘If possible, as the weight of glass would prove too much for the bicycle to carry. “Why not try films?”’⁸¹ ‘Although there is little doubt that glass forms a better support for the sensitive film, and that it is easier to pilot through the various operations of developing, etc., than the celluloid film,’ wrote J.U. in 1898 ‘there can be no two opinions as to which is better adapted for the cyclist’s use’.⁸²

In their demands, as these extracts show, cyclo-photographers were often well ahead of the curve. In fact, this was something recognised at the time, to the point that some contemporary commentators claimed that the reason why manufacturers had started producing compact cameras was, in the first place, to meet cyclists’ needs: ‘The makers of both [camera and cycle] are awakening to the ever increasing demand for vehicles and instruments specially suited for being used in conjunction’, wrote Griffin in 1885;⁸³ ‘Several makers of photographic apparatus have recognised the

great popularity of amateur photography amongst cyclists, by making cameras and accessories with various modifications, suitable for cycling purposes', commented *Wheel World* in 1886. One such camera, the quarter-plate 'The Cyclocam', was praised as 'a compact camera entirely of metal, so carefully designed as to economise space and weight in a very marked degree [...] so compact as to be easily carried in an ordinary coat pocket, and there are no loose screws to get lost'.⁸⁴ Similarly, in 1897 the *Amateur Photographer* noted 'the decided movements among our foremost manufacturers to meet the spreading tendency to combine cycling and photography, by introducing special cameras and special carriers for cyclists',⁸⁵ and the following year that 'Cyclists have been particularly well catered for lately in the matter of tripods, and makers seem almost to vie with one another in their endeavour to cut down bulk and weight to a minimum'.⁸⁶ 'Few photographers are aware of the great debt which they owe to cyclists', wrote 'Tonute' in a column titled 'The Debt Owing to the Cyclists' that was published in the *Amateur Photographer* in 1899. As the author explained:

For some time past the craze for lightness has been spreading from the actual cycle to the many accessories used in conjunction with the machine, and from thence to sister hobbies. The light, 'neat and natty' folding cameras now so much in vogue are almost entirely due to the demand of the cyclist for apparatus, and, if we believe rightly, it was Kodak Limited (then the Eastman Co.) who were the first to inaugurate this improvement, and in their advertisements they laid particular emphasis on the suitability of the new patterns for cyclists.⁸⁷

The advertisements that 'Tonute' referred to here could have been those for the No. 4 Cartridge Kodak, which was promoted with slogans such as: 'We have married the

Wheel and Camera. Bicycle Kodaks. Very light and compact cameras specially adapted for attachment to cycles. Loaded in daylight’;⁸⁸ ‘A Folding Kodak of the Highest Type. Specially Adapted for Attachment to Bicycles. Compact. Light. Efficient. Handsomely Finished. The No. 4 Cartridge Kodak’;⁸⁹ and ‘Holiday Tours with Cycle and Camera. Cycle Kodaks. With Happy Attachments – More Secure than Wedlock’.⁹⁰ Or perhaps those for the Folding Pocket, promoted instead with: ‘Take a Kodak with you! On your bicycle, slung from your shoulder, or in your pocket. Eastman’s Folding Pocket Kodak. Flat like a book. Need never be left behind. Easy to use. Mastered in a few minutes’.⁹¹ However, the very first advertisement for the Kodak of 1888 also noted in bold that ‘NO TOURIST OR CYCLIST SHOULD BE WITHOUT ONE’.⁹² That George Eastman had recognised that easier to operate and affordable cameras would have encouraged more people to take up photography, and that the Kodak promotional material ‘created not just a product, but a culture’,⁹³ has been well documented.⁹⁴ Whether Eastman had been influenced by cyclists’ demands is unknown and beyond the scope of this article, as what is under investigation here is the particular milieu within which camera users and manufacturers operated – specifically, as explored in this section, the relation between the limitations of existing camera technology and the experience of visual modernity; yet, it is interesting to note that, as a keen cyclist himself, Eastman was probably aware of the technical issues that cyclo-photographers faced, as well as the specific visual experiences they sought to capture. As Elizabeth Brayer writes, ‘the bicycle completely captured the popular imagination, becoming a staple of the magazines Eastman read and advertised in’.⁹⁵

Figure 2 about here, full page size with caption below figure. No other text on this page.

Starting in the early 1880s, advertisements for camera apparatuses and accessories that tried to address cyclo-photographers' technical issues were increasingly present in the cycling and photography press. Although what companies offered was often not yet what cyclo-photographers wanted, it seems clear from the comments above such as Tonute's, and from the type of photographic equipment promoted, that a wish was there to develop photographic technology so to meet cyclo-photographers' demands. The Birmingham-based firm of J. Lancaster & Son, which in 1884 presented itself as 'The largest makers of photographic apparatus in the world, for tourists, bicyclists &c.' offers one particularly intriguing example.⁹⁶ 'The Cycle Clip, specially constructed to fit on any part of Bicycle or Tricycle',⁹⁷ and illustrated in the advert as mounted on the wheel (figure 2), is a striking visualisation not just of cyclo-photography's fusion of the experiences of seeing and moving, but also of a yet unrealised desire for faster cameras. It is also not difficult to see why the 'Cycle Clip' disappointed customers. As a correspondent wrote to the *Amateur Photographer* in 1885: 'I have had one of Lancaster's clips, and was disappointed with it. It is not very firm, and the height of the camera cannot be altered, and the camera does not turn on the screws. The principal fault, however, is that it is fixed on the wheel, so that the tricycle cannot be moved about, as a tripod stand would, in order to find the best position from which to take a photograph'⁹⁸ – in other words, it constricted cyclo-photographers' freedom (in this case of representation) by slowing down and hampering the process, plus limiting the subjects one could take. This image of a camera on a wheel, however – almost the anticipation of a readymade that elides the usefulness both of the wheel (which can no longer turn) and of the camera (which so perched cannot be controlled) – is also an image at the vanguard of technical developments: we could say that, by adding the wheel, Lancaster & Son tried to make

a camera ‘fly’ in the same way in which cycling made a photographer (and what they saw when riding) ‘fly’. In other words, the camera on a wheel crystallised a desire to pass the speed of cycling, and the associated benefits of freedom and independence, to photography, thus anticipating some the key features of the compact cameras of later years. This desire, as I have argued, was a result of the experience of visual modernity itself.

Conclusion: Cyclo-Photographers as Popular Modernists?

In one of his three key texts on photography – ‘Daguerre or the Dioramas’, from 1935 – Walter Benjamin wrote that:

Photography, in its turn, from the middle of the century onwards, extended enormously the sphere of the market-society; for it offered on the market, limitless quantities, figures, landscapes, events which had previously been utilizable either not at all, or only as pictures for one customer. And in order to increase sales, it renewed its objects by means of modish variations in camera-technique, which determined the subsequent history of photography.⁹⁹

That the industrialisation of modes of production and, in a related way, the widening of a consumer base, propelled camera manufacturers continuously to introduce new products is undeniable, and has been the starting point for many studies of the histories and cultures of photography from the late nineteenth century. Some of these cameras, for example those produced by George Eastman’s Kodak, aimed at simplifying the process in order to increase demand for developing and printing services,¹⁰⁰ while other cameras, for example those in the form of books, revolvers or parcels produced between the 1880s and 1910, were just a novelty, and largely

impractical for the actual taking of photographs.¹⁰¹ What role people's experience of visual modernity played in driving this production, however, is a subject that I think demands further study. As the case of the cyclo-photographers has shown, camera accessories such as Lancaster's 'Cycle Clip' were not so much 'modish variations in camera-technique', as a serious attempt to meet customers' demands. These demands, as we have seen, were sparked not only by practical issues concerning the portability of the camera, but also by a new experience of visualisation as individual expression which, in turn, had unleashed a desire to engage in new ways with such visuality: this influenced how cyclo-photographers thought of camera practices, and hence what they expected of camera technology. This suggests, in turn, that while lightness, portability, and the simplification of the process were certainly the conditions sine qua non for the popularisation of photography, a new approach to photography was also the result of the emergence of a distinctively modern visual experience.

Patrick Maynard, among others, has argued that it is users, and not inventors, that determine the function of technologies:¹⁰² in other words, necessity does not drive technology, but emerges only after an invention has been used. Following this perspective, we can say that it was the engagement with cycle and camera that, revealing new experiences of looking, created the need to use photography in new ways. In other words, cyclo-photographers' experience of using cycle and camera conditioned cameras' technological developments by revealing the limitations of existing cameras in meeting the desires of such a moving gaze. The issue with glass plate cameras was not only that they were heavy, fragile, and fiddly to set up, but also that the various steps required in order just to take one exposure, and the then still relatively slow sensitivity of the plates, seemed incongruous with the pace at which stimuli met one's eyes: the demand for light, portable, and easier to operate cameras

was thus a (creative) demand for a technology suitable for engaging with visual modernity, and thus recording fragments of scenes with the same spontaneity and effortlessness as one saw them.

We can then think of cyclo-photographers as *popular modernists* in the sense that they broke with previous modes of thinking about photography, simultaneously envisioning others, while never really looking beyond the petty matters of everyday life: they were ahead of their time, yet they did not think of themselves in these terms. Modernism, as Calinescu describes it, ‘designat[es] a conscious commitment to modernity’:¹⁰³ cyclo-photographers, however, do not appear to have been consciously seeking a transformation in the photographic discourse, and certainly they did not realise that the demands that they advanced, contributing to the development of compact cameras, would eventually encroach upon and radically transform photographic conventions. Yet, their engagement with modernity was akin to what Marshall Berman has defined as an experience by which people ‘are moved at once by a will to change – to transform both themselves and their world – and by a terror of disorientation and disintegration, of life falling apart’.¹⁰⁴ This ‘will to change’ – what in Calinescu’s words we can think of as the ‘battle for the modern’ fought by the middle classes,¹⁰⁵ of which cyclo-photographers were certainly a part – manifested, in the context of photographic practices, in a desire for cameras more suitable to their visual experiences. In this way, cameras were understood as a condition of *being* modern. We can then say that the late nineteenth-century development of camera technologies was perhaps inevitable not simply because the market logic demanded the widening of its basis, but because the experience of modernity as exemplified by the case of cyclo-photographers had brought about a transformed engagement with representational practices themselves.

List of Illustrations

Figure 1. Front cover of the *Amateur Photographer* bounded volume for 1885, advertised in *Amateur Photographer* (11 December 1885), 610. © British Library Board. Shelfmark: LOU.LON 123B.

Figure 2. Advertisement for J. Lancaster & Son photographic apparatuses, published in *Amateur Photographer* (12 December 1884), 160. © British Library Board. Shelfmark: LOU.LON 224.

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Email for correspondence: s.dominici1@westminster.ac.uk

1 – ‘Our Views’, *Amateur Photographer* (20 March 1885), 378.

2 – Ibid.

3 – John Browning, ‘The Tricycle as an Aid to Photography’, *Cycling Mercury* (1 December 1882), 6–7.

4 – ‘Correspondence, Cyclo-Photography’, *C.T.C. Monthly Gazette & Official Record* (May 1888), 196–97.

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- 5 – See, for example, Serena Beeley, *A History of Bicycles*, London: Studio Editions 1992; and David V. Herlihy, *Bicycle: The History*, New Haven, CT: Yale University Press 2006.
- 6 – Glen Norcliffe, *Critical Geographies of Cycling: History, Political Economy and Culture*, Farnham: Ashgate 2015, 189.
- 7 – A.E. Harrison, ‘The Competitiveness of British Cycle Industry, 1890–1914’, *Economic History Review*, 22 (1969), 288–89.
- 8 – Harry Hewitt Griffin, ‘Cycling with the Camera’, *Amateur Photographer* (2 January 1885), 201–03. Griffin was the editor of *Bicycling New*.
- 9 – See, for example, the No. 5 Folding Kodak, [Advertisement], *Amateur Photographer* (8 January 1892), viii; the Kodet, [Advertisement], *Amateur Photographer* (19 July 1895), xvi; and the Pocket Kodak, the No. 2 Bullet Kodak and the No. 4 Cartridge Kodak, [Advertisement], *Amateur Photographer* (16 July 1897), viii.
- 10 – See Jean-Louise Comolli, ‘Machines of the Visible’, in *The Cinematic Apparatus*, ed. Teresa De Laurentis and Stephen Heath, New York: St. Martin’s 1980; and Anne Friedberg, *Window Shopping: Cinema and the Postmodern*, Berkeley: University of California Press 1993.
- 11 – Geoffrey Batchen, *Burning with Desire: The Conception of Photography*, Cambridge, MA: MIT Press 1997, 183.
- 12 – The earliest use of this term that I have been able to trace dates to 1887: Henry Sturmeay, ‘Photography for Cyclists’, *C.T.C. Monthly Gazette & Official Record* (February 1887), 74–79. However, it is likely that this term had been in circulation for some time. A ‘cyclo-photo tour’ was mentioned in ‘Cycling Photographic News’, *The*

Wheel World (December 1885), 282. In 1886, *Wheel World* reviewed a camera named ‘Cyclocam’ produced by J. Lucas and Son, Birmingham: ‘Progress and Invention’, *Wheel World* (March 1886), 136.

13 – Peter Bailey, *Popular Culture and Performance in the Victorian City*, Cambridge: Cambridge University Press 1998; Ross McKibbin, *Classes and Cultures: England 1918–1951*, Oxford: Oxford University Press 1998; and David Rubinstein, ‘Cycling in the 1890s’, *Victorian Studies*, 21:1 (Autumn 1977), 47–71.

14 – See, for example, Mary Warner Marien, *Photography: A Cultural History*, 4th edn, London: Laurence King 2014, 81–90, 165–70.

15 – The Brownie camera was launched in 1900 at the price of 5 shillings (or 25 pence in today’s currency), thus making it affordable to the working classes. In 1900, 5 shillings would have had the spending worth of about £15 today.

16 – Harrison, ‘Competitiveness of British Cycle Industry’, 297.

17 – See, for example, Norcliffe, *Critical Geographies of Cycling*; and Michael Pritchard, *A History of Photography in 50 Cameras*, London: Bloomsbury 2015.

18 – Elizabeth Edwards, *The Camera as Historian: Amateur Photographers and Historical Imagination, 1885–1918*, Durham, NC: Duke University Press 2012.

19 – See, for example, Arthur J. Leeson, ‘Correspondence. Photographic Survey of Warwickshire, etc.’, *C.T.C. Monthly Gazette & Official Record* (July 1890), 211; and Chapman Jones, ‘Cycling Records’, *Amateur Photographer* (7 August 1902), 103–04.

20 – See, for example, Duncan Jamieson, ‘Bicycle Touring in the Late Nineteenth Century’, *Cycle History*, 12 (2002), 68–75; Norcliffe, *Critical Geographies of Cycling*; Glen Norcliffe, *The Ride to Modernity: The Bicycle in Canada, 1869–1900*, Toronto: University of Toronto Press 2001; and Gary Tobin, ‘The Bicycle Boom of

the 1890s: The Development of Private Transportation and the Birth of the Modern Tourist', *Journal of Popular Culture*, 7 (1974), 838–49.

21 – Matei Calinescu, *Five Faces of Modernity: Modernism, Avant-Garde, Decadence, Kitsch, Postmodernism*, Durham: Duke University Press 1987, 41–42.

22 – Ibid.

23 – The 'rational recreation' movement, which aimed at structuring working-class leisure within a middle-class domain, was one outcome of a newly urbanised and capitalist society that sought to regulate the social activities of the working classes. See, for example, Peter Bailey, *Leisure and Class in Victorian Britain*, London: Routledge 1978.

24 – Simon Gunn, 'Translating Bourdieu: Cultural Capital and the English Middle Class in Historical Perspective', *British Journal of Sociology*, 56:1 (March 2005), 54.

25 – See, for example, Phillip G. Mackintosh and Glen Norcliffe, 'Men, Women and the Bicycle: Gender and Social Geography of Cycling in the Late Nineteenth Century', in *Cycling and Society*, ed. Peter Cox, Dave Horton and Paul Rosen, Aldershot: Ashgate 2007, 153–77; and Harry Oosterhuis, 'Cycling, Modernity and National Culture', *Social History*, 41:3 (August 2016), 233–48.

26 – This attitude aligned itself with that broader debate between 'vulgar' tourists and (self-appointed) sensitive travellers that first emerged at the end of the eighteenth century. See, for example, James Buzard, *The Beaten Track: European Tourism, Literature, and the Ways to Culture 1800–1918*, Oxford: Clarendon 1993; and Orvar Lofgren, *On Holiday: A History of Vacationing*, Berkeley: University of California Press 1999.

27 – 'Holidays', *Cycling* (August 1878), 7.

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- 28 – ‘Rambles in Essex. – No. VII. Trips and Tours’, *Cycling* (July 1879), 169.
- 29 – ‘Correspondence. The Art of Touring’, *C.T.C. Monthly Gazette & Official Record* (April 1886), 134–35.
- 30 – ‘Some Tendencies of Modern Cycling’, *C.T.C. Monthly Gazette & Official Record* (October 1894), 290.
- 31 – James Means, ‘Wheeling and Flying’, *The Aeronautical Annual* (1896), 24–25.
- See also Jamieson, ‘Bicycle Touring’.
- 32 – One of Them, ‘Letters to the Editor. Cycling Photography’, *Amateur Photographer* (19 December 1884), 165–66.
- 33 – Griffin, ‘Cycling with the Camera’, 201.
- 34 – Stein and Varden, ‘Round West London with Cycle and Camera’, *Amateur Photographer* (17 March 1893), 178–79.
- 35 – ‘Photo-Cycling Notes’, *Amateur Photographer* (10 July 1896), 36.
- 36 – For an analysis of the impact of railway travel on space and time, as well as on perceptions of landscape and mobility, see Wolfgang Schivelbusch, *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century* (1977), trans. Anselm Hollo, Berkeley: University of California Press 1986.
- 37 – H. J. Leake and A. J. Marret, ‘On a Sociable Tricycle with a Camera in North Wales’, *Amateur Photographer* (5 December 1884), 134–35.
- 38 – H. Smith, ‘Photography and Cycling’, *Amateur Photographer* (12 December 1884), 153.
- 39 – Griffin, ‘Cycling with the Camera’, 202.
- 40 – Roadster, ‘Cyclo-Photography’ *Amateur Photographer* (3 March 1893), 144.

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- 41 – A. Wheelman, ‘Cycle & Camera’, *Amateur Photographer* (8 August 1905), 105.
- 42 – ‘Cycling and Photography’, *C.T.C. Monthly Gazette & Official Record* (December 1887), 433–34.
- 43 – See, for example, Griffin, ‘Cycling with the Camera’; Vincent St. George, ‘The Tricycle and the Camera’, *Amateur Photographer* (4 September 1885), 344; ‘Cyclo-Photography’, *C.T.C. Monthly Gazette & Official Record* (March 1889), 38; ‘Cyclo-Photography’, *Amateur Photographer* (3 March 1893), 144; ‘Notes and Comments’, *Amateur Photographer* (1 August 1905), 81–82.
- 44 – See, for example, Michael Bell, *Sentimentalism, Ethics, and the Culture of Feeling*, Basingstoke: Palgrave Macmillan 2000; and Philip Davis, ‘Victorian Realist Prose and Sentiment’, in *Rereading Victorian Fiction*, ed. Alice Jenkins and Juliet John, London: Macmillan 2000, 13–28.
- 45 – Woll, ‘Cycling Photographic News’, *Wheel World* (October 1885), 169.
- 46 – R. McGahey, ‘Among the Alps with Cycle and Camera, Part I’, *Amateur Photographer* (27 May 1898), 422–23.
- 47 – ‘Cycling and Photography’, *Cycling Mercury* (1 October 1884), 3. The article was reported as having first appeared in the *British Journal of Photography*.
- 48 – ‘Letters to Editor. Cycling Photographers’, *Amateur Photographer* (19 December 1884), 165.
- 49 – ‘Cycling and Photography’, *Amateur Photographer* (10 July 1896), 35.
- 50 – Leslie Selby, ‘A Plea for the Cyclist’, *Amateur Photographer* (7 May 1897), 380.
- 51 – McGahey, ‘Among the Alps with Cycle and Camera, Part I’, 422–23.

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- 52 – R. McGahey, ‘Among the Alps with Cycle and Camera, Part II’, *Amateur Photographer* (3 June 1898), 442–43.
- 53 – Walter Benjamin, *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism*, trans. Harry Zohn, rev. edn, London: Verso Classics 1997, 36.
- 54 – Charles Baudelaire, ‘The Painter of Modern Life’, in *The Painter of Modern Life and Other Essays*, ed. and trans. Jonathan Mayne, London: Phaidon 1995, 13. ‘The Painter of Modern Life’ was written in 1859–60 and first published in 1863.
- 55 – Comolli, ‘Machines of the Visible’, 122.
- 56 – In Walter Benjamin’s assessment of urban modernity, for example, human experiences emerge diminished, the individual alienated by shock and stimuli that cannot be assimilated. See, for example, Benjamin, *Charles Baudelaire*. For Georg Simmel, urban experiences are equally overbearing, forcing the individual to protect him or herself from metropolitan life by becoming socially indifferent or ‘blasé’. Georg Simmel, ‘The Metropolis and Mental Life’, in *Simmel on Culture: Selected Writings*, ed. David Frisby and Mike Featherstone, London: Sage 1997, 174–86. The idea of modern life as defined by experiences that are fleeting, however, has also been seen in perhaps more positive terms as the motor behind the emergence of ‘a commitment to otherness and change’, for instance that embodied by the late nineteenth- and early twentieth-century avant-gardes. Calinescu, *Five Faces of Modernity*, 66, 95–148.
- 57 – Patrick Maynard, *The Engine of Visualization: Thinking Through Photography*, Ithaca, NY: Cornell University Press 1997, x, 24 (original emphasis).
- 58 – *Ibid.*, x.
- 59 – ‘The Scenograph’, *Cycling* (July 1879), 171–72.

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- 60 – H. H. Dore, ‘The Camera on Wheels. From London to the Isle of Wight’, *Amateur Photographer* (4 December 1885), 587.
- 61 – ‘Correspondence. Cyclo-Photography’, *C.T.C. Monthly Gazette & Official Record* (April 1887), 171 (original emphasis).
- 62 – The manufacturer was not specified, but the description included in the article indicates this might have been one of E. Deyrolle’s plate cameras.
- 63 – ‘The Scenograph’, *Cycling*.
- 64 – Ibid.
- 65 – ‘Letters to the Editor. A Camera Wallet for Cyclists’, *Amateur Photographer* (27 March 1885), 399.
- 66 – Sturmeý, ‘Photography for Cyclists’, 76 (original emphasis). Henry Sturmeý was both a cyclist and photographer. He promoted the Bicycle Touring Club (which became the Cyclists’ Touring Club), edited *Cyclist* (later *The Cycle and Motorcycle Trades Review*), launched the journal *Photography* (which was later absorbed into the *Amateur Photographer*), founded the *International Cycling Association* and invented, with James Archer, the three-speed hub gear for bicycles. For a brief period he also produced the periodical *Flying*. David Webb, ‘Sturmeý, John James Henry (1857–1930)’, in *Encyclopedia of Nineteenth-Century Photography*, ed. John Hannavy, London: Routledge 2008, 1358; Richard A. Storey, ‘Sturmeý, (John James) Henry (1857–1930)’, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2006, available at <http://www.oxforddnb.com/view/article/53518>, (accessed 12 Sept 2017).
- 67 – ‘The Camera and the Bicycle’, *C.T.C. Monthly Gazette & Official Record* (November 1887), 413.

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- 68 – A.W. Duncan, ‘Correspondence. Cycling and the Camera’, *C.T.C. Monthly Gazette & Official Record* (April 1888), 151–52.
- 69 – ‘Queries. 159. Camera for Bicycle’, *Amateur Photographer* (3 February 1888), 78.
- 70 – ‘Correspondence. Cyclo-Photography’, *C.T.C. Monthly Gazette & Official Record* (July 1895), 207.
- 71 – A. H. Fry, ‘Cycling with a Camera’, *Cycle and Motor World* (14 April 1897), 117–18.
- 72 – Walter D. Welford, quoted in ‘Touring and Holiday Resorts’, *Amateur Photographer* (30 April 1897), 353.
- 73 – ‘Cycle and Camera’, *Amateur Photographer* (23 September 1898), 755.
- 74 – ‘Cyclo-Photography. Some Recent Developments, Including an Ideal Cycle’, *C.T.C. Monthly Gazette & Official Record* (August 1890), 239–44.
- 75 – Arthur W. Green, ‘Letters to the Editor. How to Carry the Camera’, *Amateur Photographer* (22 April 1898), 303.
- 76 – ‘Correspondence. Cyclo-Photography’, *C.T.C. Monthly Gazette & Official Record* (May 1891), 131.
- 77 – ‘Apparatus. The Eastman Film’, *Amateur Photographer* (28 August 1885), 331–32.
- 78 – Ernest R. Shipton, ‘The Wheel and The Camera’, *C.T.C. Monthly Gazette & Official Record* (March 1887), 123–27 (original emphasis); Ernest R. Shipton, ‘The Wheel and the Camera. Part I’, *Amateur Photographer* (4 March 1887), 107–09

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- (original emphasis); and Ernest R. Shipton, 'The Wheel and the Camera. Part II', *Amateur Photographer* (11 March 1887), 118–21 (original emphasis).
- 79 – Sturmev, 'Photography for Cyclists', 78.
- 80 – Ibid.
- 81 – A.H. Fry, 'An Easter Cycling Holiday Through La Touraine', *Cycling World Illustrated* (18 March 1896), 16–18.
- 82 – J. U., 'Cycle and Camera', *Amateur Photographer* (12 August 1898), 642.
- 83 – Griffin, 'Cycling with the Camera', 202.
- 84 – 'Progress and Invention. A Compact Camera', *Wheel World* (March 1886), 136–37.
- 85 – 'Notes and News', *Amateur Photographer* (6 August 1897), 102–03.
- 86 – J.U., 'Cycle and Camera', *Amateur Photographer* (26 August 1898), 675.
- 87 – Tonute, 'Cycle and Camera', *Amateur Photographer* (7 July 1899), 3.
- 88 – [Advertisement], *Amateur Photographer* (16 July 1897), viii.
- 89 – [Advertisement], *Amateur Photographer* (20 August 1897), x.
- 90 – [Advertisement], *Amateur Photographer* (10 September 1897), viii.
- 91 – [Advertisement], *Amateur Photographer* (28 January 1898), xvi.
- 92 – See, for example, the Kodak advertisement published in the *Amateur Photographer* (21 September 1888), viii.
- 93 – Douglas R. Nickel, *Snapshots: The Photography of Everyday Life, 1888 to the Present*, San Francisco: San Francisco Museum of Modern Art 1998, 10.

94 – See, for example, Elizabeth Brayer, *George Eastman: A Biography*, Baltimore, MD: John Hopkins University Press 1996; Brian Coe, *Kodak Cameras: The First Hundred Years*, Hove: Hove Foto 1988; and Reese V. Jenkins, ‘Technology and the Market: George Eastman and the Origins of Mass Amateur Photography’, *Technology and Culture*, 16:1 (January 1975), 1–19.

95 – Brayer, *George Eastman*, 152.

96 – [Advertisement], *Amateur Photographer* (14 November 1884), 96.

97 – [Advertisement], *Amateur Photographer* (14 November 1884), 96. Lancaster published this advertisement in the *Amateur Photographer* until early 1887.

98 – ‘Answers. Cycle-Clip’, *Amateur Photographer* (6 February 1885), 282.

99 – Benjamin, *Charles Baudelaire*. This quote is from ‘II. Daguerre or the Dioramas’ in the section ‘Paris – The Capital of the Nineteenth Century’, 163.

100 – Brian Coe, ‘The Rollfilm Revolution’, in *The Story of Popular Photography*, ed. Colin Ford, London: Century in association with the National Museum of Photography, Film and Television 1989, 60–89.

101 – Brayer, *George Eastman*, 59–60; and Pritchard, *A History of Photography*, 40–41, 44–47, and 56–57.

102 – Maynard, *Engine of Visualization*, 68–71; see also George Basalla, *The Evolution of Technology*, Cambridge: Cambridge University Press 1988.

103 – Calinescu, *Five Faces of Modernity*, 86.

104 – Marshall Berman, *All that is Solid Melts into Air: The Experience of Modernity*, London: Verso 1983, 13.

105 – Calinescu, *Five Faces of Modernity*, 41–42.