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REPORT

In Association with WORLD PRESS PHOTO

The State of News Photography: The Lives and Livelihoods of Photojournalists in the Digital Age

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Luis Antonio Massa, injured Formula One driver Felipe Massa's father, leaves after visiting Massa at Budapest's AEK hospital July 30, 2009.
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Preface

We are delighted to present our first annual report on the state of photojournalistic practice across the globe.

World Press Photo Foundation is dedicated to supporting photojournalism and documentary photography worldwide, and to encouraging high standards in professional practice. For this year we have joined forces with Oxford University's Reuters Institute for the Study of Journalism to research the current state of, trends in, and future outlook for professional visual reporting.

World Press Photo Foundation is committed not only to supporting the international photographic community by organising training programmes for young photographers, but also to helping increase insight into professional practice. We have already commissioned a number of research reports, including one that explores the practice of multimedia production, and another that maps current global standards in the post-processing of images.

For the current report, we have engaged participants in the annual World Press Photo Contest, who together form a unique portrait of those active in professional reporting. Our aim is to gain a clear picture of who forms today's photojournalistic community, and of what their hopes and concerns might be.

This is the first of what we hope will be a regular series of reports. Not only do we wish to share the results with the community, but hope to learn from them ourselves, and to gain insight for developing our own activities. We also hope that this study will create a focus for issues for the community to discuss, and for others to carry out complementary research.

Lars Boering
Managing Director, World Press Photo Foundation

Contents

List of Tables 4

List of Figures 5

Executive Summary 6

1. Introduction 9

2. Methodology 13

3. Results and Analysis 14
   - 3.1 Identity, Education, and Training
   - 3.2 Work Patterns and Rewards
   - 3.3 Equipment and Technology
   - 3.4 Ethics
   - 3.5 Use of Social Media
   - 3.6 Risk and Safety
   - 3.7 The Future
   - 3.8 Snap Shots

4. Photographers' Voices 61

5. Conclusions 65

References 68

Appendix 1: Sampling, Survey Quality, and Analytical Methods 70

Appendix 2: Survey of French Photographers 74

About the Authors 75

Acknowledgements 75

List of Tables

1. *Where the respondents live*
2. *University education by employment arrangement*
3. *Photography training by region*
4. *Percentage who agree these are skills that universities, colleges, or training institutions should offer the next generation of photographers*
5. *News photographer employment category by gender*
6. *Employment arrangements of sample respondents*
7. *Employment by type of organisation*
8. *Employment status by gender*
9. *Organisations employing photographers (only employees)*
10. *Organisations employing photographers (all respondents)*
11. *Number of photographers employed at company by gender*
12. *Number of photographers employed at company by region*
13. *Control over editing and production by gender*
14. *Person who has control of editing and production by gender*
15. *Stolen images by employment arrangement*
16. *Most regular clients by photographer self-employment status*
17. *Most regular clients of the self-employed, regional breakdown*
18. *Employment arrangement against income over five years*
19. *Regional income comparison over five years*
20. *Income earned from photography*
21. *Percentage of income from photography by region*
22. *Regional comparison of assignment workload*
23. *Linear regression analysis of income*
24. *Multimedia team participation by age*
25. *How often do you stage images?*
26. *News photographers adding or removing content*
27. *Enhancement of digital images*
28. *Regional adherence to ethical guidelines*
29. *Altering and staging by type of photography*
30. *Regional breakdown of image staging*
31. *Social media use*
32. *Social media use by gender*
33. *Photojournalists' attitude towards amateur/citizen photography*
34. *Being positive about the future*
35. *Risks in five years compared to now, regional analysis*
36. *Type of employment of photographers in India/USA*
37. *Type of organisation employing photographers in India/USA*
38. *Education qualifications by country lived in*
39. *Employment arrangement, by country lived in*
40. *Likelihood of enhancing digital images by age*
41. *Age of photographers, by gender*

List of Figures

1. *University subject choice by gender*
2. *Type of training and average age*
3. *Proportion of income derived from photography relative to financial strain*
4. *Estimated mean income from photography by gender*
5. *Social media use by age*
6. *What worries photographers most*
7. *Perceptions of physical risk by age and gender*
8. *Physical risk by region and by gender*
9. *Physical risk to photographers by country*
10. *Physical risk over the next five years by age*

Executive Summary

The image is a central and vital component in modern communication. Yet the photographers who are responsible for making, processing, and disseminating professional pictures on a daily basis have rarely been studied. Who are they, where and how do they work, what rewards do they receive, and what problems and risks do they face?

This report presents information about the world's professional photographic community with a special focus on photojournalists. It is the outcome of a research project conducted by the University of Stirling, the World Press Photo Foundation (WPPh), and the University of Oxford's Reuters Institute for the Study of Journalism. The study investigates the identities, working conditions, practices, technology use, and ethics of a large number of photographers across the world.

The report is based on an online survey of professional photographers who entered the 2015 World Press Photo Contest. A total of 1,556 photographers from more than 100 countries and territories completed the questionnaire. Evidence from the questionnaire is summarised below. This is the first large-scale international survey of its kind but it is intended that this survey will be repeated annually to track the changes and circumstances of professional photojournalists and to examine the impact of the digital era on their lives and livelihoods.

Key findings:

1. Professional news photography is dominated by men, with 85% of the respondents male.
2. The majority of photographers (60%) who responded to the survey were self-employed.
3. Three-quarters of the respondents work full-time as photographers.
4. When asked to specify their role, 40% called themselves photojournalists, 30% said documentary photographers, and 14% said news photographers.
5. News photography was the largest category of photography (named by 19% of respondents), followed by personal projects (18%), portraiture (14%), and sport (10%).
6. Photographers largely work alone (80% of respondents).
7. While more than half (54%) of the photographers who took part in this study concentrate on stills photography, the overwhelming majority (93%) indicated that, given the choice, they would prefer to do still photography only. One-third work with video, either through choice or necessity.

8. Photographers are generally highly educated; more than two-thirds of our sample have university-level qualifications, although one-quarter have no specific photography training.
9. Photographers' earnings are very low, with three-quarters making less than US$40,000 per year from photography, and one-third making $10,000 per year or less. Despite this, most say they are managing financially or are feeling good about their financial situation.
10. The unauthorised use of photographs without payment is widespread. An overwhelming majority of photographers in this study have been affected by this, with most receiving no compensation.
11. Photography is a potentially dangerous occupation, with more than 90% reporting they felt vulnerable to the threat of physical risk or injury at some point during their normal duties. According to the views of respondents, South America, Central America, and the Caribbean are the most dangerous regions of the world to work in, while Europe and North America are the safest.
12. Responses confirm that the digital era has added new complexity and uncertainty to the professional ethics of photojournalism, and almost all the photographers in this survey feel that understanding ethics is important. However, some of the practices reported by photographers suggest current ethical guidelines are not adhered to in some circumstances.
13. There is an industry consensus that rejects the manipulation of photographs by adding or removing content, and 76% of photographers regard manipulation as a serious problem. Of those identified as mainly news photographers or photojournalists, 75% said they never alter a picture, with the remaining 25% saying they alter the content of images (other than by cropping) at least sometimes.
14. When asked if they stage images (i.e. ask subjects to pose, repeat actions, or wait while the photographer gets ready), 36% said 'never' but 52% said 'sometimes' (with a further 12% saying they did so at least half the time).
15. Only 10% of photographers never enhance the in-camera or RAW files by altering contrast, hue, tone, or saturation, with 51% saying they do so often or always.
16. While some feel that amateur or citizen photographers constitute a risk to their livelihoods, most photographers feel either neutral about it or see it as a positive development.
17. When it comes to working online, 63% of respondents say a personal website is important or very important to their work, while more than half say they often or always use social media as part of their work, with only 11% never using it.

18. Facebook is overwhelmingly the favoured social media platform for photographers in this study, with 62% of those surveyed ranking it first, and another 26% making it second or third. Instagram and Twitter follow along behind.
19. Three-quarters of the photographers surveyed say they have received benefits from social media, with 40% saying the benefits are non-financial, and 23% saying they have been financial.
20. Notwithstanding the low financial rewards, industry challenges, and physical risks, the survey evidence suggests that there is a high degree of job satisfaction, creative expression and personal reward among professional photographers. Two-thirds of the respondents said they were happy with their choice of livelihood, and 55% feel mostly or always positive about the future.

We believe these are all important findings not only for photojournalists themselves, but also for the agencies, designers, and editors who work with this group, for the trainers and educators who prepare them, and for the scholars and researchers who to date have largely ignored or struggled to gain access to this important piece of the media jigsaw puzzle.

1. Introduction

The death of the photographer,[1] photography, and photojournalism has been often proclaimed over the last sixty years (Bilton, 2013; Campbell, 2010; Tuck, 2013). Perhaps, as Linfield (2010: 13) argues, this arises from the fact that 'photography is a proxy for modern life and its discontents, which may explain some of the high expectations, bitter disappointments and pure vitriol it has engendered'.

While such declarations of death have regularly proved premature, photographers and photography face abundant challenges. Editorial commissions are getting scarce as traditional newspapers and magazines (legacy media) cut back or close up shop. Day rates are stagnant if not falling. Clients are demanding more for less. It feels like a constant struggle to keep up with the changing technology and the dynamics of social media.

When US career surveys name photojournalism (along with broadcasters and newspaper reporters) among the ten worst jobs, the prospects for photographers and photography seem inescapably bleak (Romenesko, 2015). But how do photographers themselves think about their lives and livelihoods? Answering that question is the purpose of this report.

This study of what photographers think comes at a time of immense and sustained upheaval within the world's media industry. This upheaval has generated diverse understandings about the nature and trajectory of change (see Campbell, 2013; Rottwilm, 2014). These transformations are often understood in terms of digital 'disruption'. This is because 'the arrival of the internet did not herald a new entrant in the news ecosystem. It heralded a new ecosystem, full stop' (Anderson et al., 2012: 83).

The internet – and more specifically, the web and the digital space that is built on the internet – is not a competitor that stands separate from the traditional media institutions. Its dynamics have created something new that encompasses all who exist in the news ecosystem, including the traditional institutions. This means that it no longer makes sense to speak of the traditional, print-based media opposed to a digital competitor. There is no such thing as traditional media any longer, even if print remains a mode of distribution for some.

The consequences of this disruption include the continuing collapse of print advertising revenue (a development which, however, predates the arrival of the internet), the restructuring of newsrooms, the revisiting and reformulation of business models for journalism, the drive for new forms of content and income, and the formal job losses that have been recently endured by many media organisations.

The reduction of the number of journalists in full-time employment over the past two decades has been one of the hallmarks of transformation

[1] Photographers describe themselves in a range of different ways from photojournalists to visual storytellers. See section 3.1 for more detail on this issue.

within the global media industry. Photographers have been at the forefront of this transformation, at times suffering disproportionate cutbacks, especially in America (Mortensen, 2014; Anderson, 2013). These include the dismantling of photography departments at traditional media companies (such as the lay-offs at the *Chicago Sun Tribune* and *Sports Illustrated*), and the concentration of photographic agencies with many being bought up by big corporate players.

The development of new forms of business has also been observed in related creative industries such as graphic design and advertising, where they have also led to a shift in work processes and behaviour. A large number of scholars (Gill, 2014; Ross, 2009; Gill and Pratt, 2008; Randle and Culkin, 2009; Neilson and Rossiter, 2005; Butler, 2004; Florida, 2002) have noted not just more versatile work arrangements such as casualisation and zero hour contracts but also a rise in stress, insecurity, ill-health, and what they call 'precarity', or the precariousness of life in the digital age among its creative producers.

Photography's latest revolution began in the mid-1990s when the darkroom was replaced by computer software and the internet began its domination of communications. It was at this point that the rules changed. Photographers faced a rapidly expanding capacity to edit, manipulate, and enhance images, while digitalisation made all images more amenable to copying, editing, and sharing. There was a corresponding rise in the demand for multi-skilling as video and audio content became popular and photographers were often the ones asked to provide it. There has also been the transformation of the audience into producers, and with technology growing in power and shrinking in cost, a new generation of amateur and citizen image-makers has emerged. They were on site when the Indian Ocean tsunami hit in 2004 and were deep underground taking pictures of the London bombings in 2005. They were present at the final moments of Muammar Gaddaffi and they witnessed the aftermath of the nuclear disaster in Japan. They were not only present and taking images, they were sending pictures, editing them, mashing them, mixing them with other media, and taking enjoyment out of the boundless creativity and appeal the technology now offered. This has posed challenges to professional photographers both in terms of the value of their images but also regarding the ethical boundaries of their business.

Despite all these challenges and changes, professional photographers are an under-studied group of creative practitioners. Some would claim this replicates the systemic under-valuing of photographers and their work in traditional print organisations through, for instance, the common omission of bylines. Even in fairly recent work on the media industry and on the creative industries, it is rare for photographers to be the principal concern. In Tunstall's *Media Occupations and Professions* (2001), photography merits only passing mention in the introduction's discussion of media occupation 'fragments' (p. 16). This absence is replicated in many other important works

analysing the sector, including Deuze (2007), Hartley (2005), and Hesmondhalgh (2013).

As a relatively small group with not much economic clout, photographers tend to be added in to research that looks at larger clusters of workers or sectors of which the media form a part, such as the creative industries. Alternatively they are included in studies of journalists. Beyond work commissioned by World Press Photo Foundation (see, especially, Campbell, 2013) we could find only a handful of research studies specifically on photojournalists as a group (Mortensen, 2014; Caple, 2013; Papadopolous and Pantti, 2011, Pantti and Bakker, 2009). Often this research looked at other groups too, such as amateur or citizen photographers.

Mäenpää's (2014) is one of the few papers dedicated specifically to photojournalists. It looks at the professional values guiding photojournalists and, in particular, examines the relationship between these values and the three activities of digital photo editing, the production of online news videos, and amateur photography. As useful as it is, Mäenpää's work is based on Finnish data obtained from twenty interviews and an online survey of 200 people associated with the photography industry, including graphic designers and art directors. More systematic but still country-specific is Vauclare and Debeauvais (2015), a French-language study of French photographers conducted by the Ministry of Culture and Communication (see Appendix 2 for some of the key findings of this study and Sutton, 2015, for an overview).

There are, of course, many different kinds of photographers operating in the world today and many who combine different types of photography in their work. News photographers might take pictures at weddings or shoot portraits to earn some extra income; fashion photographers will work on special projects for the advertising market; some photographers teach; some experiment with different films or technologies; others do just about everything. While many kinds of photographers and a wide range of photographic work, equipment, and endeavour are included in this study, our principal focus is on news photography and, in particular, on photojournalism and documentary photography.

We gained access to a representative sample of photographers through collaboration with the World Press Photo Foundation. In 2015 more than 5,000 professional photographers from more than 100 countries sent in their work to be judged across a variety of categories. It is this group which was tapped for the data that underpin this report. All entrants to the 2015 contest were invited to participate anonymously and confidentially, and 1,556 answered in excess of 60 questions, some with multiple options or with the opportunity to explain their answers in more detail. While there are, as with any survey, a number of limitations and caveats (see the Methodology section for more detail on this), we believe this is the first time a comprehensive global survey has been conducted that gives us a detailed insight into how

photographers think about the world of professional photography and about photojournalism specifically.

There are a lot of data in this report, and we have structured them to enable people to access the information and the analysis as easily as possible. You will find sections below on photographers' identity, education, and training, together with their work patterns, equipment, and technology, use of social media as well as on their attitudes to ethics, risk, and the future. As it demonstrates in detail, there are significant differences across and even within the world's regions and even within its sub-regions when it comes to the attitudes and practices of professional photojournalists.

Here, then, for the first time, is a sense of what life is like for photographers, and in particular for photojournalists from around the world, in this digital 21st century.

2. Methodology

The questionnaire was designed by the research team with input on various drafts from board members at Oxford University's Reuters Institute for the Study of Journalism, the World Press Photo Foundation (WPPh) organisation, and from a number of volunteer photographers. The questionnaire was hosted on the Bristol Online Surveys (BOS) platform and was approved by a University of Stirling research ethics committee.

The questionnaire was piloted with the assistance of the Reuters news agency in London between Tuesday 12 January and Saturday 17 January 2015. Eight photographer/staff members based in seven different territories – including Nepal, the US, China, Belgium, and Palestine – participated and provided comments and suggestions on the instrument and its structure. The final questionnaire was distributed on Monday 2 February to 5,158 potential respondents by the WPPh. All the respondents had entered work for the WPPh's prestigious annual photographic awards for 2015, but all were informed that responding to the study did not have any bearing on their chances for an award. The WPPh, which is keen to participate in research on photography and on photographers, agreed to make available its database of entrants to request responses to the questionnaire. Entrants were approached by email and asked to link voluntarily to the online, anonymous questionnaire. A copy of the final questionnaire instrument is available on request from Adrian Hadland at adrian.hadland@stir.ac.uk.

The link and questionnaire were closed on Sunday 15 February 2015. A total of 1,556 questionnaires were completed during this time, representing a high response rate (for online surveys) in excess of 25%. Clearly, as RISJ adviser Katrin Voltmer commented during the data-gathering process, 'it seems these photographers are keen to have their voice heard'.

About half of those who filled in the survey were living in Europe, with about a quarter in Asia (including Oceana and the Middle East), 11% in South and Central America and the Caribbean, and just under 10% in North America. Many analyses below present comparisons in terms of these continental groupings, which involve pragmatic aggregations reflecting both regional and economic patterns, though the questionnaire did collect detailed information on the country of nationality, residence, and of usual employment, and more detailed regional indicators are used at certain points.

If you would like to read more about the specifics of the methodology used in this study as well as the type of sampling carried out, the quality of the data and also the analytic methods employed, please see Appendix 1 of this report.

3. Results and Analysis

3.1 Identity, Education, and Training

Identity

The respondents to this survey represent photojournalists from more than 100 countries and territories from Armenia and Belarus to Uruguay and Vietnam. Data were collected on the respondents' nationality, their country of residence, and the country that they reported that they do the most work in. Respondent nationalities included for example 22 from Argentina, 16 from Australia, 30 from Bangladesh, 41 from Brazil, 3 from the Democratic Republic of the Congo, 68 from France, 63 from Germany, 55 from Holland, 35 from Iran, 143 from Italy (the biggest national group of photojournalists in the study), 34 from Mexico, 63 from Poland, 56 from Russia, 16 from Turkey, and 14 from Venezuela. Countries of residence and work showed similar profiles but it is noteworthy that 12% of respondents indicated that they did their most work in a country that was not their country of residence (the majority of these respondents were resident in either Europe or North America). However viewed, the survey therefore provides a truly global evidence base, the first of its kind assembled to gather data about the lives and futures of the world's photojournalists. Table 1 summarises the distribution of respondents by their continent of residence, which is the measure of regional location that we use most frequently in analyses below.

Table 1: Where the respondents live

Europe	816	52.7%
North America	142	9.2%
South and Central America and Caribbean	178	11.5%
Australasia	19	1.2%
Asia, Oceana, and Middle East	346	22.3%
Africa	48	3.1%
Total	1549	

Note: Excludes 7 respondents who did not indicate country of current residence.

According to our sample, the average photojournalist in 2015 – using modal characteristics as a guide – is a self-employed man aged 30–50, earning less than $30,000 a year from photography, while also making some supplementary income from other sources. The average photojournalist is very well educated, usually to degree level or beyond, and is most likely to rely upon media companies (newspapers and magazines with both print and online distribution) to earn a living. He will usually work alone, occasionally joining a multimedia team and, if he has to, shooting video or writing text.

When asked how they would describe themselves, most of our respondents opted either for 'photojournalist' (39%) or for 'documentary photographer' (30%). We did not set out clear or distinct definitions for either of these categories as the intention was to record how photographers describe themselves. We assume, though, that 'photojournalist' and 'documentary photographer' are similar activities with perhaps more of an immediate news focus for the former ('photojournalist') and a more feature-oriented, less time-driven orientation for the latter ('documentary photographer').

About 14% of respondents self-identified as 'press photographer', which we understood to be a photographer working for a newspaper or news organisation. Only small numbers described themselves as a multimedia journalist (2%), visual journalist (2%), or visual storyteller (8%), categories which we understand to encompass news-oriented storytelling across a number of platforms. It should be borne in mind, however, that along with its photography contest, the WPPh also runs a multimedia contest. Photographers can enter both, but we distributed this questionnaire only to the photography contest entrants, so the sample will naturally exclude many of the professionals who concentrate on video and multimedia. The majority of photographers who said they 'mainly' shoot news chose 'photojournalist' as the category that best reflected their role. There were also a number of alternative labels suggested by respondents themselves in answering this question. Suggestions such as 'industrial photographer', 'street photographer', 'humanitarian photographer', and even 'abstractions photographer' were put forward, though most of these were selected by only small groups or even just by individuals.

Almost two-thirds of the respondents said they took 'mainly' news photographs, though judging from various responses in the survey, 'news' is a broad category that could include a wide range of events and activities, including sport, art, and entertainment. Within the text of this analysis, we have tried to be clear when we are talking more generically about photography and when we are more specifically referring to photojournalism or even one of the other photographic, though not necessarily journalistic, activities.

What is clear is that professional photography is a largely male occupation with men constituting an overwhelming majority of our respondents (85%). This pattern established itself very early in the data collection. This suggests the gender imbalance is common in most countries and in all regions. There are certainly women working in the industry with more than 200 in this sample alone (see Snap Shot 1, in section 3.8 below, which highlights the data concerning women photographers). Even allowing for the sampling limitations of the online survey, the results suggest a fundamental gender imbalance in professional photography globally.

In age terms, the 30–39 group and the 40–49 group together account for two-thirds of all the respondents, though the slightly younger (20–29) group

and the slightly older (50–59) group are also substantial and together make up most of the balance. The sample of 1,556 photographers also contains a handful of people in their 70s and older and another handful in their 20s and younger.

Age does appear to be a significant factor in the work practices, outlook, and security aspects of professional photojournalism (see Snap Shot 4, in section 3.8).

Education and Training

From this sample, photographers are generally highly educated. The majority has tertiary education and many have higher degrees. In our sample, younger photographers and women tended to be better educated on average. Self-employed photographers also had slightly higher qualification levels, as can be seen from Table 2.[2]

Table 2: University education by employment arrangement

	University level education	Lower level or no formal education	N
Self-employed	73%	27%	926
Employee	68%	32%	592
All	71%	29%	1518

Note: Cramer's V association=0.056, p-value of chi-square statistic=0.029.

European photographers in our sample tended to be the least well educated (65% with university-level qualifications compared to averages around 80% in other regions). The disparity is probably explained by both the average age of the European respondents being slightly higher, and possibly because technical training or apprenticeships rather than university education has traditionally been the preferred route into the profession in Europe (though this latter point is an anecdotal one unsupported by any available research).

[2] In Table 2 and elsewhere, we show the Cramer's V association (0.056) and the p-value from a chi-square test for the relationship between the two variables that are summarised in the table (educational level and employment status). In this case, it is apparent that photographers who described themselves as 'self-employed' were slightly more likely to have a university-level education (73%) than those who were employees (68%). In the language of the summary statistics, we would say that this is a weak association (Cramer's V of 0.056), but this relationship is nevertheless confirmed as statistically significant (because the p-value of the chi-square test is less than 0.05, which is the conventional threshold beyond which we believe that it is unlikely that this statistical pattern could have arisen from a sample taken from a population where there was no such relationship between the variables).

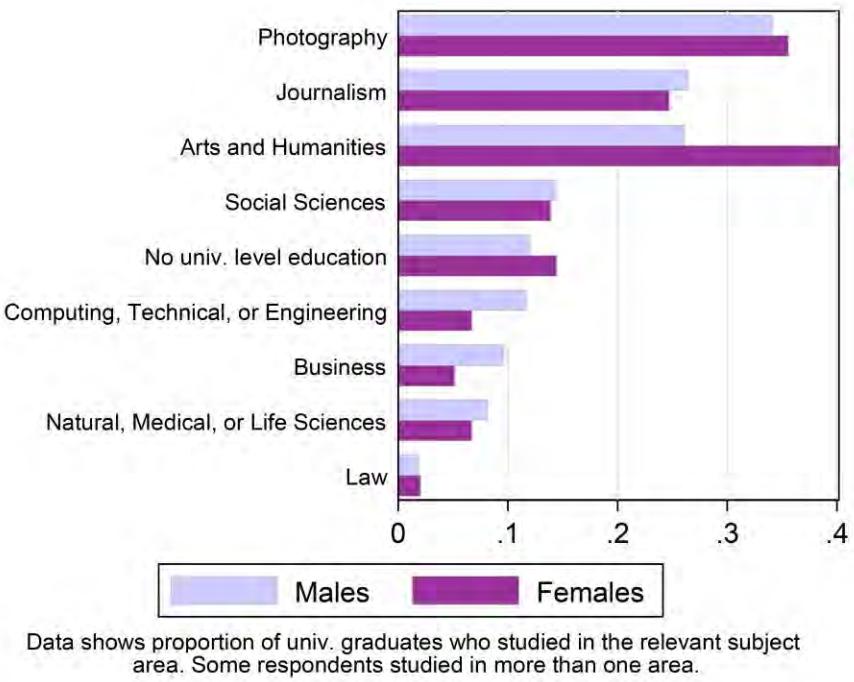


Figure 1: University subject choice by gender

Photographers who have been to university have usually specialised in the arts and humanities, journalism, or photography (see Figure 1). Respondents who had studied journalism (as 21% did) were more likely to have ended up employed by a company than being self-employed (26% as opposed to 17%). From continent to continent, the proportion of photojournalists who had studied journalism also varied considerably: 37% of respondents from South and Central America and 33% of those from North America, but only 19%, 17%, and 16% of those responding from Asia, Africa, and Europe respectively had studied journalism.

Although most photographers had studied at university level, only a little less than a third of the 1,556 photographers surveyed say they had formally studied or trained in photography at a tertiary level, encouraging us to assume that most photographers learn on the job either through in-house training provision, from their peers, or from their mentors (if they are apprentices or photographer's assistants). About a quarter of photographers surveyed said they had received in-house training. In-house training tended to be more common in South/Central America, Asia, and Africa (all around 33%), but less so in Europe (22%) or North America (15%) (Table 3). Overall, though, some 80% of respondents described some form of specific training concerning their work as a photographer. This figure was similar across continents, except that for respondents from South and Central America, only 7% had not received any form of training (Table 3).

Table 3: Photography training by region

	Received in-house training?	Any type of specific training in photography?
Europe	22%	79%
South and Central America and Caribbean	33%	93%
North America + Australasia	15%	76%
Asia, Oceana, and Middle East	33%	78%
Africa	33%	77%

Notes: N=1556. Cramer's V between continent and in-house training=0.143 (p-value =0.000). Cramer's V between continent and any specific training = 0.117 (p-value = 0.000).

In terms of training received, we asked our respondents to indicate what kinds they had been given and correlated these answers against age, region, and gender. Receipt of training in making video as well as stills was relatively more common among respondents from Central and South America (34%) compared with those from other regions (around 20–5%). Photographers who had received video training also tended to be younger, on average.

On multimedia training, there was an even bigger age gap with this form of training more common among younger respondents. North America had the highest rate of multimedia training (25% of respondents) and Europe the lowest rate (16%). See Snap Shot 3 (section 3.8) for a comparison of North American and European photographers.

North America also had the highest rate of training photographers in graphic design, though self-employed photographers and women had noticeably higher rates than other groups when it came to graphic design skills. Overall, the rate across the cohort was only about 10%.

Figure 2 summarises the different kinds of training with the age of the photographer.

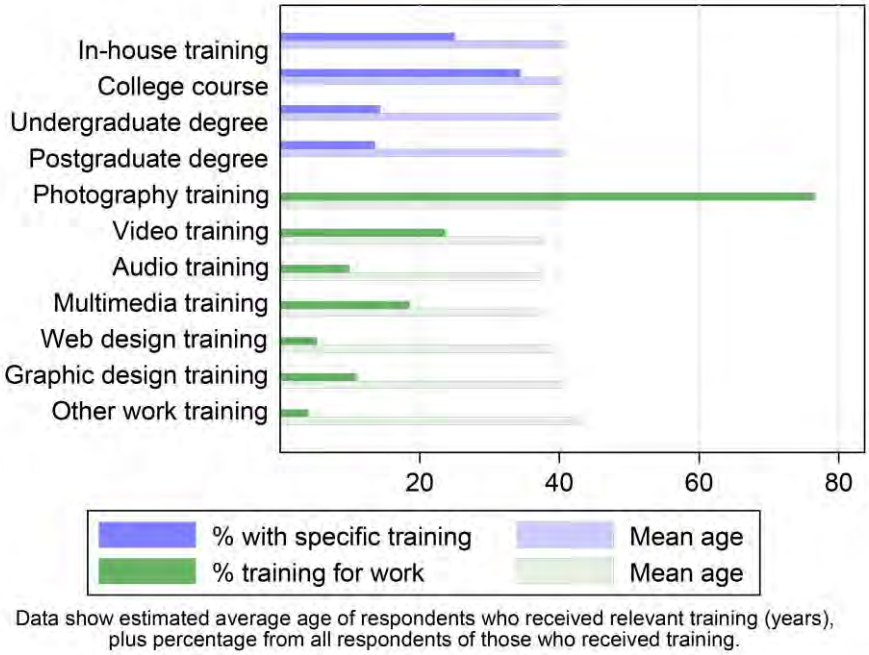


Figure 2: Type of training and average age

In Figure 2, we see that there is surprisingly little variation in qualifications by age. The lighter bars show the mean age of respondents with the different training experiences, and these are all nearly the same value for the different categories of educational training type (the blue bars). There is also relatively limited variation in average age of those holding different specific training associated with their work, with as noted above a pattern whereby those with video, audio, and multimedia training tended to be a little younger on average.

The photographers who participated in this survey don't feel their university courses were particularly useful in training them for the work they do and would hope that, in the future, skills like communications, presentation skills, networking, and entrepreneurship will enable photojournalists to perform more effectively (see section 3.7).

Asked whether their formal training had equipped them for their chosen profession, less than half of those who had received training agreed that this was true (47%). A sizeable proportion (16%) felt their training hadn't equipped them at all. These results suggest a degree of ambivalence about the relevance of training received. By region, those most ambivalent about their training were in Africa (21% said no, it didn't help).

It is also interesting to note that when respondents were asked whether they 'feel overwhelmed by the pace of technological change' in their work, patterns of response did not show a strong relationship to training experience (for instance, 11% of those who had some form of specific training reported that they felt overwhelmed 'mostly' or 'always', and this was true of 12% of those who had not had any specific training related to photography). It might be anticipated that those with more formal training experience would be

more likely to report a positive response to technological change, but this pattern is not evident in the survey responses.

Respondents were also asked about what kinds of skills universities, colleges, and training institutions *should* be offering to better equip the photographers of the future. Responses are summarised in Table 4 (over the page). Almost all respondents agreed that 'photography skills' were required. But after this, about 60% said video would be a good skill to have (even though most of them prefer photography and don't really like shooting video). Indeed, respondents were generally in favour of skills provision in a variety of formats, with high numbers supporting the provision of skills in communications and networking, social media, budgeting, mobile journalism, and business skills, for example. It is noticeable, for nearly all types of skill, that female respondents were more likely to agree that the skills should be formally provided through training institutions. There were also three categories of skills (marketing, budgeting, and presentational skills) for which self-employed respondents were considerably more likely to advocate training provision.

Table 4: Percentage who agree that these are skills that universities, colleges, or training institutions should offer the next generation of photographers

	% agreeing	% women agreeing	% self-employed agreeing
Photography skills	83	81	82
Video skills	59	64	59
Mobile journalism skills	44	47	41
Web design skills	32	38	31
Entrepreneurial/business skills	46	54	52
Financial/budgeting skills	45	55	52
Social media skills	55	57	55
Administrative skills	28	33	30
Communication/networking skills	63	68	65
Presentation/public speaking skills	45	56	47
Sales/marketing skills	49	56	56
Other skills	7	11	9

3.2 Work Patterns and Rewards

Work Patterns

The industry has a very high rate of self-employment, with some 60% of the 1,556 photographers surveyed indicating they are self-employed. This is likely to be a result of the common pattern of job losses at picture desks and in traditional media companies in recent years where photographers have often been laid off at a faster rate than writers (Mortensen, 2014).

There are regional variations to this picture with countries from the global South more likely to have lower proportions of self-employed photographers and higher numbers of photographers employed by companies (see India, Snap Shot 2).

When we look at photographers who 'mainly' do news photography, the overall picture shifts slightly, with half self-employed and a corresponding increase in the number working for large companies. In Table 5, we see how self-employment has a strong gender dimension among news photographers, with the male rate falling below the sector average of around 60% and the female rate considerably higher than the sector average. A

considerably larger proportion of male respondents indicated they are employed on long-term contracts both relative to the sector as a whole and relative to their female counterparts. This indicates greater long-term stability in the job for male, news-oriented photographers.

Table 5: News photographer employment category by gender

Employment category by gender, for news photographers only

	Male	Female	Total
Self-employed	46.6%	72.0%	49.6%
Employed on long-term contract	36.2%	17.0%	33.9%
Other employment arrangement	17.2%	11.0%	16.5%
N	861	118	979

Cramer's V = 0.167, p = 0.000

Among the news-oriented photographers, the two largest categories of employer are 'newspapers with web site (print and online)' (almost a third) and news or photo agencies (about a quarter collectively). We define news agencies – such as Reuters or Agence France-Presse – as media organisations that specialise in 24-hour text and visual reportage, including photographs. Photo agencies commission and sell only photographs and/or video but not usually text reportage. In both cases, photographers can be full-time, held on a long-term retainer, or operating on short-term day rates or ad hoc arrangements. Online-only news sites, non-governmental organisations, and non-media companies employ only tiny fractions of the photographers who focus mainly on news.

After self-employment, working for a large company on a long-term contract was the next biggest category among the respondents. However, less than one in five of the respondents said they fell into this category of large company employment. Though the data offer a useful perspective, the relationship between self-employment and the other categories will be interesting to track over time as the industry continues the post-analogue restructuring process. Media collectives or co-operatives, in which small bands of photographers get together and share office space and/or administrative resources, was the third biggest category of employment, with just under 10% of photographers saying this is how they operated in 2015.

Only a few respondents (68, or just 4% of the sample) described their work arrangement as short-term contract work for either large or small companies, which was surprising to us as anecdotal evidence suggested this was far more commonplace.

Table 6: Employment arrangements of sample respondents

		Employee:	
Self-employed	59.5%	Large company, long term	20.0%
Media collective/cooperative	8.9%	Large company, short term	2.6%
Not employed, but would like to be	1.9%	Small company, long term	4.8%
Not employed by choice	0.5%	Small company, short term	1.7%
Total responses:	*1556*		

When photographers did indicate they were employed by a company and were not one of the large group of self-employed, newspapers were overwhelmingly the most common source of employment. A fifth of the employed photojournalists said they worked for newspapers, a reminder of how important this sector continues to be, in spite of the recent challenges.

With newspapers still such a key employer for photojournalists, particularly in less developed countries, this suggests a potential area of risk in the industry, particularly if the pattern in Western Europe and North America is replicated elsewhere. However, as we see below, media industries in the global South may not prove to be as vulnerable to the job shedding and 'precarity' of the West, as the media model may be fundamentally different. In some areas, such as in parts of Asia, media like offline (print) newspapers continue to thrive and expand and online activities remain inaccessible to the mass public.

After newspapers, photo agencies closely followed by news agencies (which may be interchangeable) were the second and third most common employing entities respectively. Together, photo and news agencies employ slightly fewer than newspapers. Magazines continue to be an important source of employment but online news sites hire only a very small (3%) proportion of the photographers who participated in this survey.

Table 7: Employment by type of organisation

Newspaper (print only)	2.8%	News agency	9.1%
Newspaper with website	19.3%	Photo agency	10.9%
Magazine print only	1.4%	Non-media company	1.0%
Magazine with website	3.3%	NGO	1.7%
Online news site	3.2%	Other	5.7%
		Not employed by an organisation	41.6%
Total responses:	*1556*		

Men tend to predominate in company employment. Legacy companies running newspapers and magazines with websites continue to be a critically

important source of income and employment for professional photographers in every region. About 38% of photographers are employed by newspapers globally (see Table 7) followed by photo agencies (19%), news agencies (16%), and magazines (8%). With newspapers undergoing challenging transitions as the industry shifts to digital products and platforms and reviews its business model, there is clearly a shared vulnerability.

There are evidently differences in employment patterns across the globe. Large media companies employ only 12% of photographers in Europe (compared to 36% in Asia and 28% in Central America) while Europe also has the highest proportion of self-employed photographers (69% compared to 67% in North America and 41% in Asia).

The rate of employment by photo agencies seems to be a good barometer of the degree to which employment by formal media companies has broken down and is being replaced by self-employed or freelance photographers. The two factors appear in many instances to be inversely proportional. So, for instance, in the South and Central American group surveyed, large companies employ 28% (one of the highest) while photo agencies employ only 8% (the lowest). By contrast, photo agencies employ the highest proportion of European photographers (25%) while employment by large companies (12%) in Europe is the lowest among the regions. Europe has the highest proportion of self-employed photographers (69%) while Central America has the second lowest (48%) after Asia (41%). Asia also has a high rate of employment by big companies and a low employment rate of photo agencies.

Table 8: Employment status by gender

	Male	Female
Self-employed	55.9%	79.2%
Employed on long-term contract	27.5%	10.2%
Other employment arrangement	16.6%	10.6%
Total	1318	236

Cramer's V=0.174, p=0.000

As Table 8 demonstrates, there is a stark difference between the employment status of men and women in the industry. The rate of self-employment is clearly much higher among the 236 women photographers included in this study than it is for the men, while long-term contracts are also far more scarce.

Of the photographers surveyed who stated they were employees (and not self-employed), almost half work for newspapers, a quarter for news agencies or online news platforms, and about 15% for photo agencies (Table 9).

Table 9: Organisations employing photographers (only employees)

	Male	Female	Total
Newspaper	47.4%	38%	46.6%
Magazine	6.6%	4%	6.4%
News agency/online news	25.7%	22%	25.4%
Photo agency	14.6%	22%	15.2%
Other	5.8%	13%	6.4%
Total	534	45	579

Cramer's V = 0.107, p-value = 0.161

It is worth noting that many respondents who called themselves 'self-employed' also filled in this question, presumably reflecting the variety of contractual and ad hoc employment arrangements that exist in the sector (such as multiple retainers for individual photographers or those employed in the field for an extended series of short-term jobs). Table 10 shows the same patterns for all respondents, including self-employed, and some key differences are discernible, including lower levels of employment by newspapers and a broader range of employers (reflected in the 'other' category).

Table 10: Organisations employing photographers (all respondents)

	Male	Female
Newspaper	39.2%	27.4%
Magazine	8.1%	7.6%
News agency/online news	21.7%	16.0%
Photo agency	18.8%	17.9%
Other	12.2%	31.1%
Total	803	106

Cramer's V = 0.176, p-value = 0.000

The data from this survey also indicate that newspapers employ 50% of South American and Central American (including the Caribbean) photographers, 49% of North Americans, 42% of Africans, 40% of Asians, and only 30% of Europeans. By contrast, photo agencies employ the highest proportion of European photographers (25%) compared to South and Central America (8%), Asia (15%), Africa (18%), and North America (15%).

About half of employed photographers operate in small teams of less than ten. Indeed about one in ten of the respondents were the only

photographer employed by their company, and this rises to one in five for women photographers. Nevertheless big companies employing thirty or more photographers continue to be an important provider of jobs in the industry with around 28% of both men and women in the sample working for these larger businesses.

Table 11: Number of photographers employed at company by gender

	Male	Female
How many photographers at your company?		
None	2.4%	10%
Just me	10.5%	20%
Fewer than 10	34.1%	24%
10–20	18.6%	14%
20–30	6.7%	2%
More than 30	27.7%	29%
Total	581	49
Cramer's V = 0.161, p-value = 0.006		

Looking at employment trends by region (Table 12), bigger teams of photographers tend to predominate in Asia where 40% of the respondents operate in teams of thirty or more. Elsewhere, only 20% of the respondents worked in teams that size. In the other regions, photographic news teams tend to be only a handful strong, usually less than ten.

Table 12: Number of photographers employed at company by region

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
How many photographers at your company?					
None	4%	1%	2%	8%	4%
Just me	14%	9%	9%	13%	11%
Fewer than 10	34%	41%	28%	29%	38%
10–20	20%	23%	15%	21%	15%
20–30	6%	5%	6%	8%	6%
More than 30	22%	19%	40%	21%	26%
Total	255	92	205	24	53
Cramer's V = 0.114, p-value = 0.038					

Most of the respondents in this study, close to three-quarters of the sample, indicated they were full-time photographers. About 18% worked part-time as photographers but also have another job, while 5% are part-time photographers but had no other source of employment. Men are more likely

to be full-time and women are more likely to have another job. Women are also more likely to work part-time and not have another job. Respondents from Europe were slightly less likely to work as full-time photographers than those from other continents.

The photographers who took part in this study were invited to use the questionnaire to explain who they report to in the workplace and who has authority or control over their photographs.

To avoid the complication of having non-photographic organisations or structures included in the analysis, we isolated respondents who said they earned 'all' or 'almost all' their work from photography. We then asked this group whether they felt they had control over the editing and production of their photographs and, if not, who did.

In this gender breakdown (Table 13), male photographers – a higher proportion of whom work for companies – were much more likely to say they 'never' have control over the editing and production of their work. Overall, just under half of the respondents (43%) said they had control some of the time. A few less than that agreed they had control most of the time and about 18% said they had no control whatsoever. In general terms, this represents a fairly significant degree of ownership by photographers over their work and output and supports other data in this study on job satisfaction.

Table 13: Control over editing and production by gender

	Male	Female
Do you have control over editing and production of your work?		
Never	18.7%	11.3%
Sometimes	43.5%	39.1%
Mostly	37.9%	49.6%
Total	782	115
Cramer's V = 0.088, p-value = 0.030		

When it came to the individual responsible for editing and production, about a quarter of the photographers said it was they themselves who were in control. The largest group, however – perhaps not surprisingly for people involved in the news industry – were the editors (which includes department head or managers). Just under 60% of the respondents indicated that these were the people who had ultimate authority over the editing and production of their work. About 18% of the photographers surveyed said their clients were in control. In gender terms, female photographers tended to have more personal control over their work and males were more subject to editors. This reflects the employment/self-employment pattern seen earlier, according to which more men are employed by companies and more women are freelance or self-employed. An additional analysis by region showed little difference in this pattern from region to region.

Table 14: Person who has most control of editing and production by gender

	Male	Female
Who has most control over editing and production of your work…?		
You	23.7%	32.4%
Editor	58.8%	49.0%
Client	17.5%	18.6%
Total	743	102
Cramer's V = 0.071, p-value = 0.118		

Most of the photographers surveyed in this study agreed their images had been used without authorisation and, overwhelmingly, where this had been the case, no remedy or payment had been forthcoming. Many photographers didn't know whether their work had been used elsewhere. But of the ones who did know, the self-employed photographers were slightly more vulnerable, though this pattern was marginal as Table 15 indicates.

Table 15: Stolen images by employment arrangement

	Self-employed	Employee
Your images ever used without authorisation?		
Yes	72.2%	70.8%
No	22.8%	29.2%
Total	772	511
Cramer's V = 0.072, p-value = 0.010		

Finally in this section, we asked the respondents about the kind of work that they do on a day-to-day basis. As expected from this sample, the majority of respondents said they shoot still photographs only, though this was only just over half at 54%. About 18% said they shoot a mix of video and stills. Photographers are slightly more likely to mix video and stills if they are employed (22%) compared to the self-employed group (16%). European respondents (57%) were far more likely to only shoot still photographs than their counterparts in North America (44%) while North Americans were more likely to shoot video (29%) compared to Europeans (17%). Many photographers are working on personal projects (19%), with portraiture a not too distant fourth (14%).

When asked about which work they would prefer to do, 62% of the sample said they would prefer to take still photographs only, with relatively more males having this preference (63%) than females (52%). In a regional comparison, Europeans (64%) and North Americans (65%) have a stronger

preference for stills only compared to Central and South Americans (53%), and Africans (44%).

Overall, a surprisingly large proportion of photographers said they enjoyed their current mix of work, whether it was stills, video, or multimedia, commercial or news-oriented.

Two-thirds of the photographers who participated in the study said they were happy or very happy with their mix of work. Females were marginally happier (68%) than males (65%). Regionally, respondents from South and Central America were the happiest photographers (77% said they were happy with their mix of work) with patterns of satisfaction in other regions largely in the 62–6% range.

In terms of clients, the self-employed cohort of photographers showed a very heavy reliance on newspapers and magazines. This, together with the high rate of employed photographers working for the legacy media, is another indication of how important this sector continues to be for professional photojournalism. If photographers are employed by a newspaper, they are unlikely to gain extra work from other newspapers. This is probably why less than a quarter of employed photographers say their main client is a newspaper. The key statistic here is that 43% of the self-employed photographers surveyed in this study said that newspapers were their most regular clients.

Table 16: Most regular clients by self-employment status of photographers

	Self-employed	Employee
Most regular clients include…?		
Newspaper	43.2%	23.5%
Magazines	50.2%	19.8%
Total	926	592
Cramer's V = 0.201, p-value = 0.000 (Newspapers/Emp. status)		
Cramer's V = 0.306, p-value = 0.000 (Magazines/Emp. status)		

A slightly higher proportion of the self-employed group in the study said they worked mainly for magazines. For just over half of the self-employed photographers (and 20% of employed photographers), magazines constituted the most regular clients.

Looking at the position globally, it can be seen that for self-employed photographers newspapers and magazines remain critically important in terms of work and income.

Table 17: Most regular clients of the self-employed, regional breakdown

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Most regular clients include…?					
Newspapers	38.1%	35.4%	25.4%	37.5%	41.6%
Magazines	43.4%	36.5%	27.5%	33.3%	35.4%
Total	816	178	346	48	161

Cramer's V = 0.115, p-value = 0.000 (Newspapers/Region)
Cramer's V = 0.133, p-value = 0.000 (Magazines/Region)

About 38% of the self-employed photographers in this study list magazines (with and without websites) as their biggest clients. European self-employed photographers are particularly reliant on this portion of the market, with 43% saying magazines are their biggest clients. This compares to only 27% in Asia and around a third in most of the other regions.

Rewards

Despite relatively low earnings (a third of the respondents said they made less than $10,000 a year and three-quarters made US$39,999 or less from photography), some 60% of the photographers who participated in this study say they are managing financially or are feeling good about their financial situation.

Around 38% of the respondents described their financial situation as either 'very difficult' (13%) or 'difficult' (25%), whereas 22% of respondents described their situation as either 'good' (19%) or 'very good' (3%). These patterns are broadly consistent with levels of financial anxiety found across other populations and is broadly suggestive that photographers have neither more nor less financial anxiety than other individuals in other sectors.

In the UK for instance, in the 2009 UK's 'Understanding Society' survey (University of Essex, 2011), 26% of respondents were 'living comfortably' (roughly equivalent to the 'good' or 'very good' descriptors) and 42% indicated some degree of financial strain (choosing one of three answer categories that suggests some difficulty). This conclusion also holds after taking account of the skewed age and gender distribution of the sample of photographers: restricting analysis to males aged 30–50, 38% of the photographers report some difficulty and 22% report a good situation (coincidentally these are the same figures as for the sample of all photographers); the equivalent figures for males aged 30–50 in the Understanding Society data are 45% and 20%.

There did appear to be a weak relationship between levels of financial anxiety and both employment contract type and the proportion of income gained from photography (see Figure 3). The vertical axis in the figure

represents indicators of financial anxiety (the percentage of people who describe their circumstances as difficult or very difficult for the solid lines; the percentage who feel their situation is good or very good in the dashed lines). We see that company employees were slightly more likely to describe their circumstances as difficult. The worst profiles were for those for whom photography provided a medium proportion of their income, while those who either took hardly any income, or who took all or nearly all of their income from photography, were on average slightly less subject to financial strain.

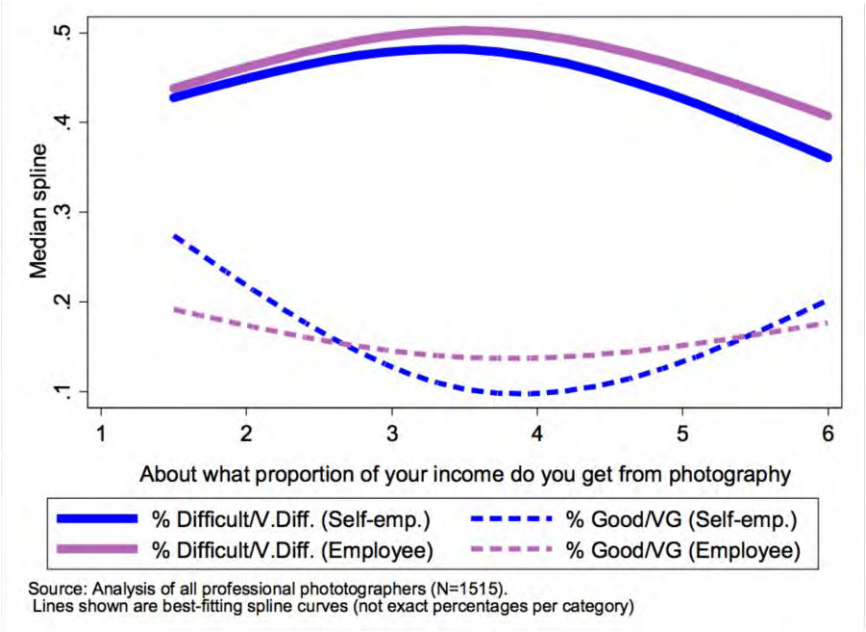


Figure 3: Proportion of income derived from photography relative to financial strain

When comparing their income at the time of the survey in 2015 to five years ago, more self-employed photographers felt they were generally worse off (44%) than employed photographers (36%). By contrast (Table 18), 38% of the self-employed photographers felt they were better off in the last five years, compared to 41% of employed photographers.

Table 18: Employment arrangement against income over five years

	Self-employed	Employee
Income now compared to 5 years ago (from photography)?		
Less/A lot less	43.7%	35.9%
Pretty much the same	18.5%	23.5%
Higher/A lot higher	37.8%	40.6%
Total	794	549
Cramer's V = 0.084, p-value = 0.009		

In a regional analysis, more European photographers felt that over the last five years they had fared worse, with almost half of the group saying they were financially worse off. Correspondingly, Europe was also the region in which fewest photographers felt they were better off compared to five years ago.

North Americans were slightly more positive than the Europeans overall, but were still pessimistic about their financial fortunes compared to photographers from Asia, Africa, and South and Central America. In Table 19 the regional comparisons are set out matching region of residence against estimations of financial well-being.

Table 19: Regional income comparison over five years

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Income now compared to 5 years ago (from photography)?					
Less/A lot less	45.8%	37.3%	29.0%	33.3%	43.9%
Pretty much the same	20.6%	19.3%	20.1%	15.6%	26.5%
Higher/A lot higher	33.6%	43.5%	50.8%	51.1%	30.6%
Total	708	161	303	45	147
Cramer's V = 0.122, p-value = 0.000					

The respondents in this study were given an (optional) question concerning how much money they make in a year from photography. Almost all (88%) agreed to answer the question and we then asked them to estimate their annual income in US dollars. This information is broken down in Table 20 (over the page) by gender, with region and with type of employment. Since many photographers earn income from other sources, the data shows total income earned from photography on the one hand for all respondents with valid data (N = 1370), and on the other hand for those respondents who indicated that they get all or almost all of their income from photography (N = 787).

Table 20: Income earned from photography

	All respondents (N = 1370)			Respondents for whom all or nearly all income is from photography (N = 787)		
	0–29k	30–59k	60k or above	0–29k	30–59k	60k or above
	Row percentages					
All	70	20	10	58	27	15
Male	70	20	11	59	26	16
Female	75	19	6	56	34	11
Employee	66	20	14	56	24	18
Self-employed	72	20	7	59	29	12
Europe	70	20	10	57	27	16
S./Cent. America and Caribbean	81	14	5	74	18	8
Asia, Oceana, Middle East	80	14	7	74	19	8
Africa	74	18	8	72	22	6
N. America + Australasia	39	38	23	20	49	31

It is noticeable that there are many more female photographers in the lowest income (0–$29,999) bracket than male and proportionally fewer women than men in the highest ($60,000+) bracket. Looking at annual income in terms of employment arrangement, it is evident that self-employed photographers are over-represented in the lower pay brackets when compared to employees.

In the regional analysis, summarised in Table 20 and in Figure 4, we see marked variations in incomes by regions. In all regions other than North America, three-quarters of all photographers tend to earn less than $29,999 per annum. More than 70% of the total sample fall into this bracket, with about 20% in the middle ($30,000–59,999) bracket and generally less than 10%

in the top ($60,000+) bracket. Incomes in North America are notably higher but close to 40% still earn less than $29,999 a year from photography, with about the same proportion in the middle bracket. North America has a much bigger group proportionally in the top band, at 23%, compared to a global average of 10%. Figure 4 summarises the same patterns but represented in terms of the estimated mean income (inferred from the median point of the income bands that respondents indicated). The image shows that the variation in money from photography by continent is heightened amongst men who make all or nearly all of their money from photography.

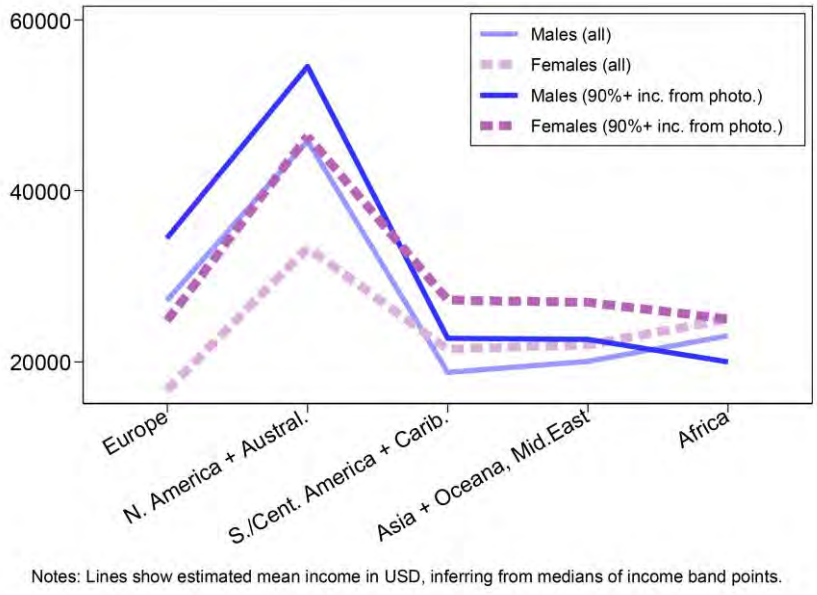


Figure 4: Estimated mean income from photography by gender

The patterns do, of course, reflect the levels of different markets in the regions, with higher salaries in North America and Europe and lower pay in Africa and Central and South America. Overall, though, 58% of our photographers make less than $20,000pa and 70% make less than $30,000pa from photography. If we restrict attention to those who get all or nearly all of their income from photography we still see relatively low income patterns, with 58% below $30,000. The global average personal income is currently just under $18,000pa while the average salary in the US is around $37,000pa (Alexander, 2012). Relatively speaking, photographers are often better off than the global average. However, as a profession characterised by high levels of educational qualification, the reported salaries suggest a prevalence of relatively low income amongst photographers across the globe.

Many photographers, even those employed full-time by media companies or agencies, supplement their income by work and activities beyond photography. Only 43% of the respondents indicated that they get 100% of their income from photography alone.

More than half of photographers (57%) surveyed have some source of income other than photography. Even employed photographers have extra sources. Less developed countries tend to see photographers finding income from additional sources, with 69% of North Americans relying 100% on photography for their livelihoods compared to Europe (57%), Central and South America (54%), Asia (57%), and Africa (52%). In Table 21, we can see the regional contrast between those photographers who earn 80% or less of their income from photography as opposed to those who earn all or almost all (90%+). In Africa, the proportion is about 50:50, though this is a small cohort. Elsewhere, the proportion is roughly 60:40 with most photographers earning all or almost all of their income from taking pictures or associated activities.

Table 21: Percentage of income from photography by region

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
% of income from photography (males only)					
From 0 to 80%	39.8%	44.7%	42.7%	51.1%	29.2%
All or nearly all	60.2%	55.4%	57.3%	48.9%	70.8%
Total	674	159	316	45	120
Cramer's V = 0.089, p-value = 0.034					

A wide range of activities, mostly photography-related, are engaged in by photographers to generate extra income. These include commercial work (25%), personal projects (19%), and teaching (13%).

Many also make extra money from print sales (the sale of photographs), the highest proportion from North America (38%), followed by Africa (25%), Europe (24%), Central and South America (20%), and Asia (16%).

We asked our respondents about how they get their work assignments and who assigns them to their work profile. Most photographers who work for organisations are handed assignments rather than choose what work they want to do. Two-thirds of those who work for organisations said 'yes' they were assigned work (66%) while a third said they could choose what they wanted to do. Male photographers tended to be assigned work more often than female photographers.

Overall, though, most of the photographers who participated in this survey said they decided what jobs they took on from day to day with only 3% saying they 'never' had an input into this. Similarly, on the question of who made the decision regarding where or how photographs were published, 42% of employed photographers and 66% of self-employed photographers said they were the ones who decided this. Both these sets of figures indicate

that photographers, even those working for large media companies and reporting daily to editors and line-managers, still retain a considerable degree of choice about what work they do. This may well underpin the surprisingly high level of job satisfaction and the generally positive outlook regarding the future.

On the issue of whether photographs were edited or altered without the photographer's input, almost 80% of the sample said this happened only occasionally, with a third saying it never happened. More than half of the photographers surveyed have their captions written or altered without their input, with male photographers and those in Asia and Central America most at risk. Only a third say their captions are never written or changed.

The data indicate there is a large volume of work being conducted by photographers at this time, with more than 40% of respondents indicating they carry out in excess of twenty assignments a month and 22% saying they do thirty or more assignments. In the higher volume category, there are more men (23%) than women (16%), with employees tending to produce more work (48% carry out 30+ monthly assignments) than the self-employed (21%).

Table 22 is a regional comparison of assignment workload. It indicates that there are no strong regional differences in this respect but, arguably, higher rates of assignments in the Americas.

Table 22: Regional comparison of assignment workload

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
How many assignments expected per month					
0–19	58.7%	52%	67.0%	62%	48%
20 or more	41.3%	48%	33.0%	38%	52%
Total	298	100	221	21	65
Cramer's V = 0.127, p-value = 0.023					

More than half (54%) of the self-employed photographers in this sample said they received less than five commissions per month, a contributing factor undoubtedly to low incomes across that segment of the sector.

Country-to-country variations in income from photography were heightened. For example, using multilevel models, the intra-cluster correlation in incomes by countries (i.e. the proportion of the variations in patterns of income that can be attributed to country-to-country differences) was 38%, 40%, and 39% for those people who earned most or all of their income from photography in relation to country of nationality, residence, or work respectively.

Table 23: Linear regression analysis of income

	Regression coefficient	*p-value*
Intercept	-10357	0.368
Gender (female)	-5454	0.026
Age in years	1458	0.008
Age in years squared	-11.5	0.068
Works in multimedia team	5627	0.001
Prefers making 'stills' only	1265	0.475
[country]	*[multiple]*	0.000

N = 787 (respondents who get all or most of their income from photography). Model includes dummy variables for each country (100 countries) of residence. Model r2=0.472 (adjusted r2=0.393). Y = imputed income in dollars.

Table 23 examines the influence of several different factors on the income received by respondents. It uses a technique called 'regression' which serves here to take account of the joint influence ofcountry of residence, gender, age, working in a multimedia team and respondents 'only producing stills'. In total it shows that a substantial proportion (47%) of the variation from person to person in income levels, amongst those who get all or most of their income from photography, can be attributed to these factors . More importantly, the results show a distinctive effect of gender (net of other factors), and of age, and working in a multimedia team (higher average income), but not of only taking stills. If the same regression is done without controlling for country of residence or continent, about 10% of income variation is explained by these factors, but this probably isn't an appropriate comparison given national variations in income.

3.3 Equipment and Technology

Cameras

Digital cameras are used almost universally now (98%), and the rate is equivalent across all the regions and all the other categories.

Film cameras are still in use, however. Almost a third of self-employed photographers surveyed said they still use traditional, analogue film cameras. This is significantly more than the 19% of photographers employed by companies who also use film cameras from time to time.

European photographers (31%) are the largest proportional group of self-employed respondents to use film cameras, though it is fairly marginal, compared to those living in North America (28%), Central and South America (22%), Asia (18%), and Africa (27%).

The use of film cameras is not indicative of shift away from digital, as 98% of photographers use digital as a matter of course.

Format

The majority of photographers who took part in this study take pictures in the RAW format (69%) rather than JPEG (31%) for capturing digital images. Only four respondents (0.3%), reported that they used another format.

Video

Up to a third of the respondents to this survey shoot video as well as still images, with an emphasis on male (33% versus 27% female) and younger (average of 39 years versus 43-year-old average for stills only) photographers.

Respondents were also more likely to shoot video if they were an employee (40%) rather than self-employed (28%). Photographers in South and Central America (37%) or Africa (42%) are more likely to shoot video as part of their work than those in Europe (30%).

Multimedia

Just over half of the photographers surveyed in this study (and recall that videographers were not included in the sample) said they occasionally work in multimedia teams.

A gender analysis shows there is not much difference, but a breakdown in terms of age shows that younger photographers are more likely to work in multimedia teams than their older counterparts. Company employees are also more likely to work in multimedia teams than the self-employed respondents.

Table 24: Multimedia team participation by age

Ever work in a multimedia team?			
	No	Yes	N
29 or younger	30.1%	69.9%	219
30–39	37.7%	62.3%	546
40–49	41.1%	58.9%	479
50–59	46.5%	53.5%	243
60 or above	53.6%	46.4%	69
All	39.8%	60.2%	1556
Cramer's V = 0.113, p-value = 0.001			

Other Equipment

Mobile phone cameras were a popular tool for photographers in this survey with almost 30% of the sample saying they used these devices in the field. We found that almost half of North Americans use their mobile phones (47%) as compared to 28% of Central and South American, 27% of Asian, 30% of African, and 26% of European photographers.

The use of drones to capture photographic images, though a small cohort of only forty, tended to be the domain of younger, male photographers located largely in Europe (20) or Asia (10).

Just under 10% of the photographers surveyed said they used POV (Point of View) cameras, while 21% said they carried and used audio recorders.

A range of other equipment was mentioned including Hasselblad, Rolleiflex, and other large or medium format cameras, instant cameras, and notebooks.

3.4 Ethics

In the questionnaire, we addressed ethics by asking questions about how a photographer influences the capture or presentation of an image. These questions concerned three sets of practices:

- Staging, meaning whether a photographer asks subjects to pose, repeat actions or wait for them to shoot the picture.
- Manipulation, meaning whether content is added to or removed from images (other than through cropping), thereby changing the material content of the photograph.
- Enhancement, by which digital images are processed by altering contrast, hue, tone, saturation, or similar feature, in order to improve the look of a photograph.

In some areas there was a strong consensus among our respondents on what the ethical rules are, or should be, when it comes to photography and the digital image. There was overwhelming agreement that the manipulation of photographs is an important issue for the industry. Eight out of ten news photographers indicated they believe manipulation is a 'very serious problem'. Almost all the photographers who took part in this study agreed that it was critical that photographers understand professional ethics. In spite of this, there was evidence of mixed attitudes and practice on staging, manipulation, and enhancement.

On staging, about 62% of the respondents said they sometimes or always asked subjects to pose, repeat actions, or wait for a shot. Only one-third said they 'never' staged images. Staging, of course, is more acceptable in some sectors of professional photography, such as advertising or art photography. We therefore isolated the photographers who said they shot 'mainly' news (Table 25) and compared them to the rest.

Table 25: How often do you stage images?

How often do you stage images?		
		N
Never	36.2%	563
Sometimes	51.8%	806
About half the time	7.2%	112
Mostly	3.8%	59
Always	1.0%	16
Total		1556

This shows a far higher proportion of news photographers (36% of those who 'mainly' shoot news) 'never' stage their images, though this is still less than half the total. This means even most news photographers agree they stage images from time to time. This is certainly contrary to codes of practice at most news organisations and indicates an important gap between the codes and what happens in the field. It suggests that the idea of the photographer being a fly on the wall and not in any way affecting the news event or issue they picture must be revised.[3]

There is little ambiguity on the general question of manipulation, meaning the addition or subtraction of material content in images. Here, the overwhelming majority of respondents (more than three-quarters) agreed this was a serious issue. In spite of this absolute majority, and even discounting those non-news photographers for whom this would be less of an issue, this still leaves close to a quarter of respondents engaging in image manipulation.

When we combined photographers who 'mainly' shoot news with those who defined themselves as either press photographers or photojournalists, giving us a strong cohort of news-oriented photographers, we found that three-quarters would 'never' add or remove content from a photograph. But we also found that one in five from the same group would 'sometimes' do this.

Table 26: News photographers adding or removing content

	Other jobs	Mainly news + photojournalism
How often do you alter composition (add or remove content)?		
Never	72.9%	74.9%
Sometimes	24.2%	21.3%
About half the time	1.8%	1.5%
Mostly	1.8%	1.9%
Always	0.2%	0.9%
Total	871	685

[3] Most newspaper photographers are required to shoot portraits, and this could have influenced their responses to this set of questions on staging. Further research on this finding is necessary.

On enhancement, the overwhelming majority of respondents in this study indicated they capture images using a RAW format, though elsewhere in the survey many photographers reported they use multiple formats including film. It is not surprising that only a very small proportion (less than one in ten) of our respondents agreed they 'never' enhance their digital images given that in-camera files require processing in order to become images suited for publication. On the other hand, almost a third said they 'always' enhance while 90% indicated they do at least some of the time.

Further on enhancement, the photographers in this study were asked how often they might adjust the contrast, hue, tone, or saturation of their digital images. Only one in ten photographers say they would never enhance their images.

Table 27: Enhancement of digital images

How often do you enhance digital images?		
		N
Never	9.4%	150
Sometimes	32.7%	508
About half the time	7.1%	110
Often	21.8%	339
Always	28.9%	449
Total		1556

When asked whether or not they follow guidelines on image alteration, 26% of photographers followed their company's codes, while 58% said they followed their own standards. Generally speaking – as demonstrated in Campbell (2014) – industry standards allow for 'minor' alterations and regard 'excessive' changes as unacceptable, although there are no clear standards as to what counts as minor versus excessive. Whether photographers' personal standards embody a similar understanding is unknown.

We would expect the rate of adherence to codes to be higher among news-oriented photographers – as other kinds of photography are not necessarily formally subject to the same rules – and this is indeed borne out by the data. Twice as many news-oriented photographers (i.e. those who 'mainly' shoot news photos) follow company guidelines as non news-oriented photographers. Half of the news photographers follow their own guidelines, rising to two-thirds among the photographers who focus on topics that are not 'mainly news'. This still leaves one in ten news photographers not following any ethical code and most favouring their own principles and rules over any company guidelines.

If the data are broken down into a regional comparison (Table 28), a gentle contrast in attitude is discernible. Though the trends are broadly similar, European photographers are the least likely to follow guidelines (either their own or their company's) while North Americans are the most likely to follow them.

Table 28: Regional adherence to ethical guidelines

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Follow guidelines/standards on digital processing?					
Use guidelines	81.0%	83.7%	85.8%	77.1%	91.3%
No guidelines	19.0%	16.3%	14.2%	22.9%	8.7%
Total	816	178	346	48	161
Cramer's V = 0.093, p-value = 0.009					

If one looks at a comparison (Table 29) across the different types of photography correlated with ethical questions around altering or staging, a complex and uneven picture is presented. Personal projects, which are carried out by many of the respondents, appear to include a strong reluctance to alter composition, but staging is commonly acceptable. News photography is the least tolerant of either alterations or staging, while portraiture, understandably, is reluctant to alter but willing to pose. Overall, a simple majority of respondents to this survey, regardless of photographic field, are generally against altering photographs but tolerant of staging.

Table 29: Altering and staging by type of photography

Type of photography mainly done	% who 'never' alter composition (q37)	% who 'never' stage images (q43)
News	77	42
Sport	70	37
Entertainment	71	33
Environment	74	36
Nature	65	33
Fashion	64	28
Portrait	71	29
Commercial	63	21
Personal projects	76	35
Other	73	36
All	73	36

A regional breakdown of staging certainly tells us that the practice is widespread. On average, a third of the photographers admitted to staging, with it least prevalent in Australia and North America (43%), rising to 70% in Europe and 75% in Africa.

Table 30: Regional breakdown of image staging

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
How often do you stage images?					
Sometimes/Often	70.6%	55.6%	59.8%	75%	43.5%
Never	29.4%	44.4%	40.2%	25%	56.5%
Total	816	178	346	48	161
Cramer's V = 0.189, p-value = 0.000					

3.5 Use of Social Media

The use of the web and social media as a means of showcasing work, attracting commissions, and staying in touch with the community was a common phenomenon among the photographers who took part in this study.

More than 60% said they felt their personal website was an important aspect of their work.

Facebook was the most popular social media platform, with 62% of our respondents ranking it most important and another 26% ranking it second or third. Instagram and Twitter were also popular.

The self-employed photographers tended to make use of personal websites more often than the employed ones, with 92% of the self-employed having their own websites against 44% of employed photographers.

Table 31: Social media use

Most important social media?		
		N
Facebook	68.6%	957
Instagram	10.4%	145
Pinterest	0.1%	2
Tumbler	0.7%	10
Twitter	10.7%	150
Weibo	1.2%	17
WeChat	2.2%	30
Other	6.1%	85
Total		1396

Three-quarters of the respondents felt their work had benefited from social media, with 23% saying they had enjoyed direct financial benefits and 40% saying the benefits had not been financial, but were nonetheless important. Only a quarter of the photographers in our study said they had felt no benefit from social media. Generally, the photographers as a whole showed a good understanding of how social media work in terms of engaging ideas and communities.

A variety of uses were described, with only 18% of the respondents defining the main use of social media as marketing or publicity. The vast majority understand, then, that social media are not simply a broadcast, promotional tool, but again are about engagement and information.

There was a clear gender and age differential concerning social media usage. In gender terms, female photographers who participated in our study were much more engaged in social media, with 76% of them thinking the activity was important (compared to 61% of males). Table 32 demonstrates the gender difference when it comes to attitudes about social media's value. Fewer women photographers surveyed 'never' use social media, while more use it 'often'.

Table 32: Social media use by gender

	Male	Female
Use social media a part of your work?		
Never	11.2%	8.5%
Sometimes	38.6%	34.8%
Often	50.2%	56.8%
Total	1318	236
Cramer's V = 0.050, p-value = 0.149		

In regional terms, North American photographers participating in the survey were more likely to use social media than photographers from any of the other regions. Asian photographers in the study showed the lowest level of social media use. North American photographers also reported the highest level of direct benefits from social media, with 41% of those surveyed agreeing with this assertion, compared to only 21% of the Central and South American photographers.

Age appears to be an important indicator of social media usage, as can be seen in Figure 5. At its most stark, the average age of those who 'often' used social media was 35.5 years as opposed to the average age of those who 'never' used it, which was 47 years.

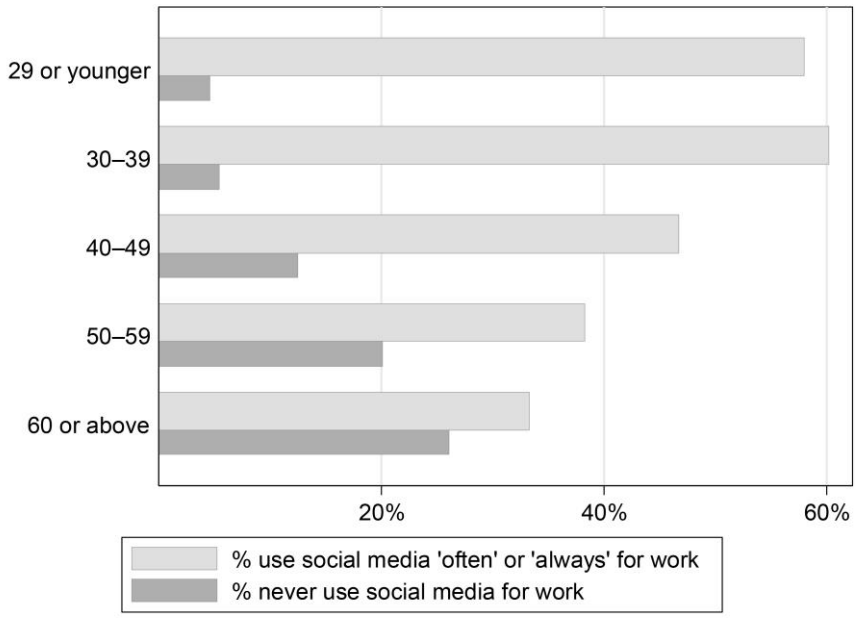


Figure 5: Social media use by age

3.6 Risk and Safety

Most photographers report facing a number of significant risks in their daily work, often physical in nature but also risks to their financial stability and job security. These risks are expected to worsen in the years ahead, according to a majority of our respondents.

One of the strongest trends of this research is the high level of physical risk to which photographers feel vulnerable during the normal course of their work. Less than one in ten photographers surveyed say they are 'never' exposed to risk at work, while a very substantial 92% say they are exposed to physical risk at some point. Almost two-thirds face physical risk 'sometimes', while as many as 21% of the respondents reported that they face physical risk 'frequently' or even 'always'. The majority of photographers think that this level of risk is likely to increase rather than decrease over the next five years.

The things that worry photographers the most, according to our survey, are risk of injury or death, erratic income, failure to provide for families, and a decreasing demand for work. These are illustrated, broken down by gender in Figure 6.

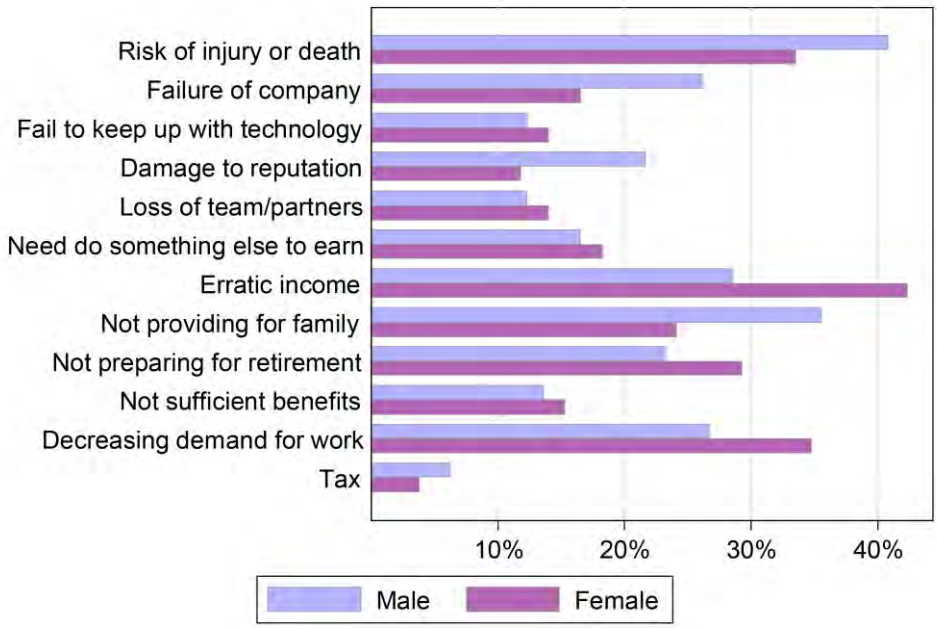


Figure 6: What worries photographers most

Figure 6 indicates that financial risks faced by photojournalists are felt deeply by the group who participated in this study. This is reflective, as we indicated in the introduction of this report, of the 'precarity' of creative work in the digital era and the challenges of securing a reliable income over time. Data concerning financial risk are presented and analysed in the section on work patterns and rewards above, and are also referred to in the following section on 'the future'.

In addition to the financial (and other) risks of photojournalism in the 21st century, and indeed outranking the financial concerns as the most popular choice by this sample, there is the issue of physical risk. It is to this that we now turn.

While physical risk is widespread among photographers, those most exposed are younger, male company employees. Older, self-employed, and female photographers generally face less physical risk at work.

The response to questions on physical risk varied by age in a relationship that interacts with gender (see Figure 7). Female photographers were slightly more likely to describe facing risks 'often' or 'always' in middle age groups, but for male respondents there was a much stronger relation between age and risk which was essentially linear in pattern: younger male respondents were much more likely to report facing more risks (and much less likely to report 'never' facing physical risks).

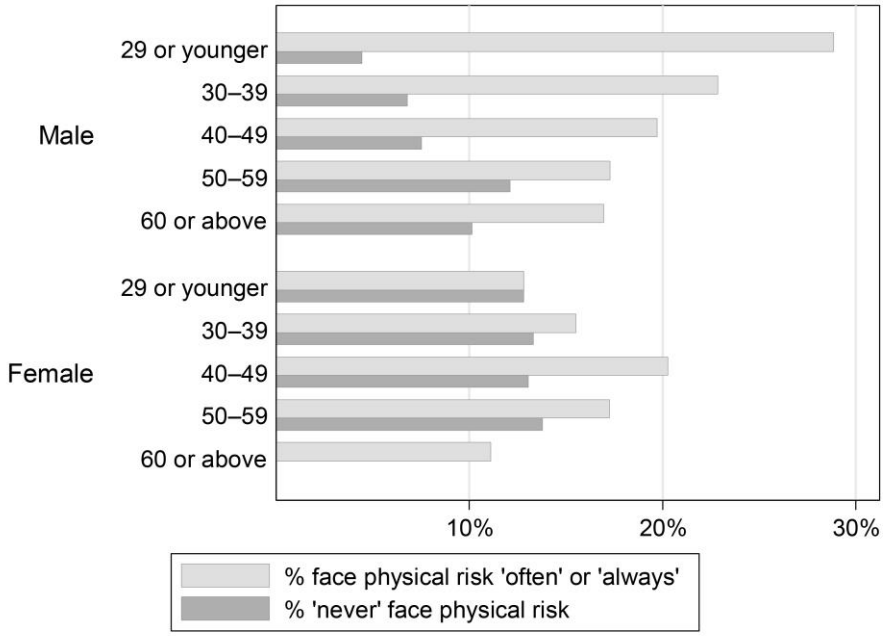


Figure 7: Perceptions of physical risk by age and gender

Photographers' vulnerability to risk is exacerbated by the solitary nature of their work. This survey confirms that photography is an occupation that is generally carried out by a lone individual, often self-employed or freelance (see section on work patterns above).

There is considerable variation across regions and across countries in the degree of physical risk faced by photographers, according to our data. South America, Central America and the Caribbean is the most dangerous part of the world to work as a photographer while Europe and North America are the safest. These regional variations are demonstrated in Figure 8.

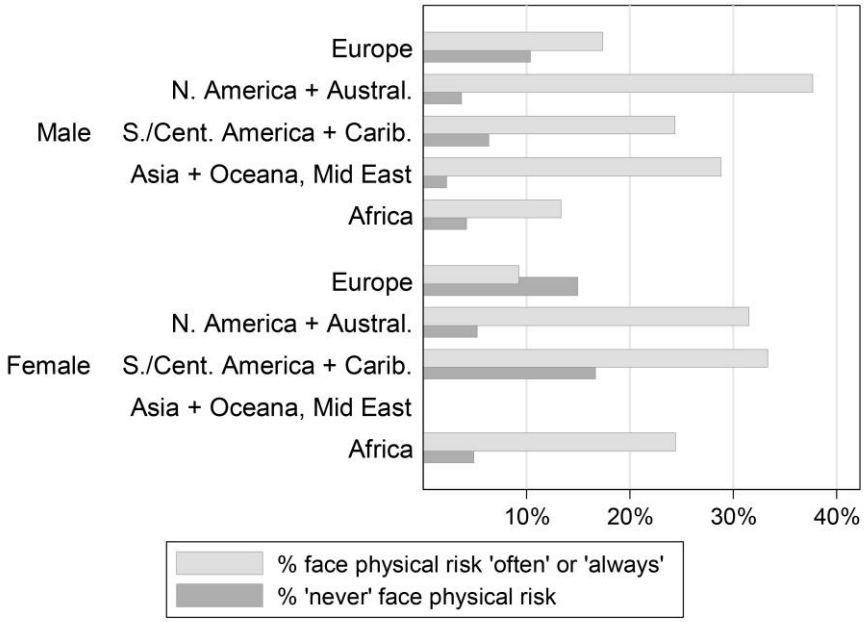


Figure 8: Physical risk by region and by gender

The country by country variations are even greater when it comes to perceptions of physical risk (see Figure 9).

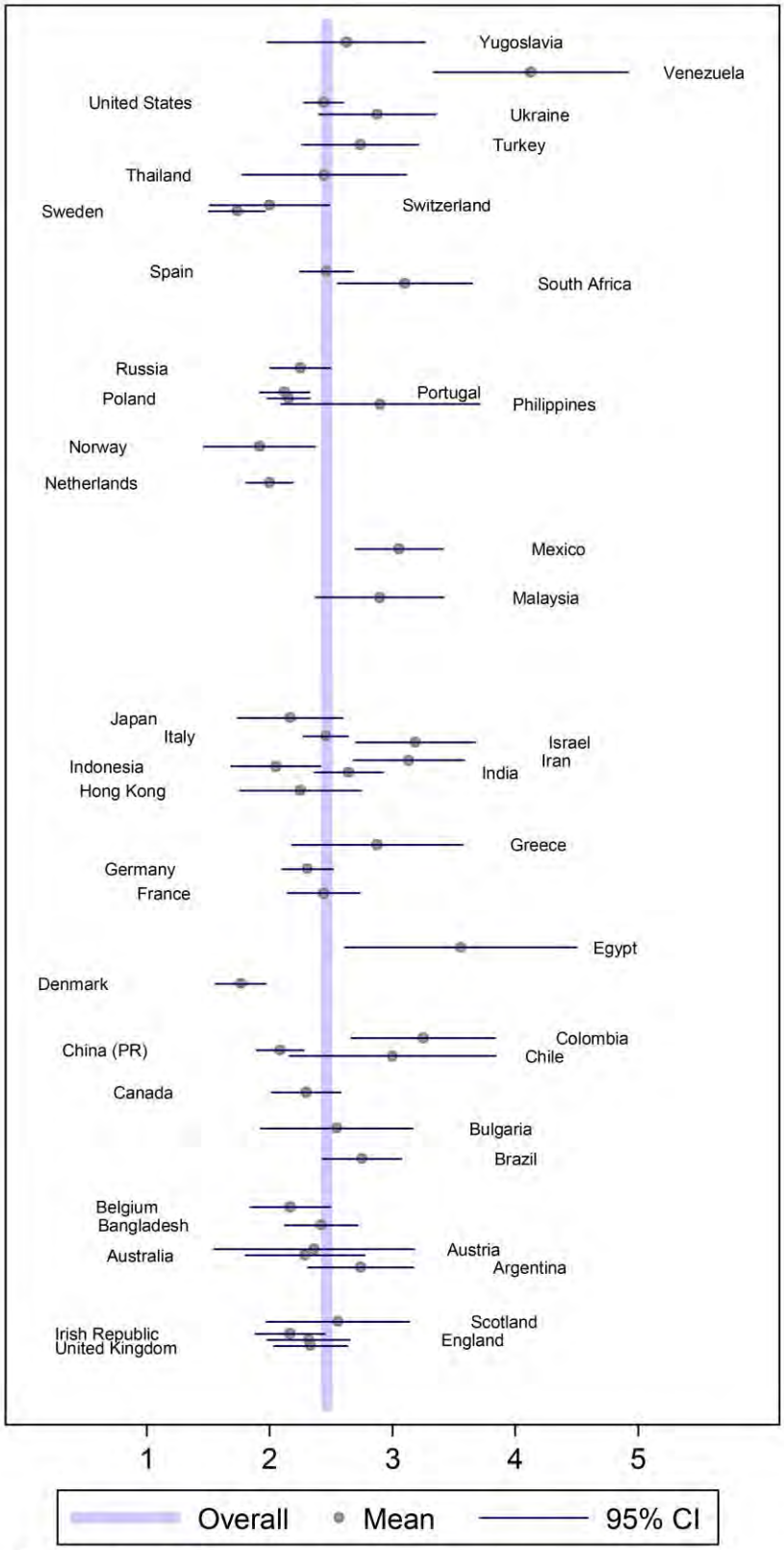


Figure 9: Physical risk to photographers by country (CI = Confidence Interval)

According to our data, Venezuela is the country where photographers feel they are most vulnerable to the risk of physical injury or death during the normal course of their work. There were 14 respondents from Venezuela in this survey. Other high-risk countries identified by our respondents were Egypt, Colombia, South Africa, Israel, Iran, and Mexico, while lower risk countries included Denmark, Sweden, Norway, the Netherlands, and the People's Republic of China.

Generally, the group as a whole believed that physical risk at work would increase over the next five years, with the self-employed slightly more pessimistic about this aspect.

It is not only physical or even financial risk to which photographers are exposed, however. The survey specifically probed the rise of amateur or citizen photography and asked the respondents to judge what kind of risk, or opportunity, this development implied.

Overall, about a third of the photographers surveyed felt amateur or citizen photography was a risk to them and their livelihoods, a third felt it added something new to the industry, and a third were neutral about the development. The older the photographer, the greater was the perceived risk. If a photographer was in full-time employment, he or she tended to think amateur or citizen photographers added something to the mix. Threat levels, whether photographers were self-employed or working for a company, were more or less the same.

It might be expected that photojournalists would feel considerably more at risk from amateurs than other categories of photographers. But, in fact, there wasn't much difference, as Table 33 indicates.

Table 33: Photojournalist attitudes towards amateur/citizen photography

	Other jobs	Mainly news + photojournalism
Feeling about impact of amateur/citizen photography?		
Adds something new	38.6%	34.4%
Neutral	34.1%	28.2%
Don't like (makes work difficult)	16.5%	18.4%
Threat to my livelihood	10.8%	19.0%
Total	868	680
Cramer's V = 0.125, p-value = 0.000		

In this table, we grouped together any respondent who described themselves as a 'photojournalist', a 'press photographer', or who took pictures 'mainly' of news events and correlated this with feelings about the impact of amateur/citizen photography. The group who didn't fall into the news group is represented by the other column. Certainly, fewer of the photojournalist group were convinced that the amateur or citizen photographer 'adds

something new' to the industry, while the levels of risk were much more keenly felt. More than a third of the photojournalists (37%) felt they didn't like or were threatened by amateurs or citizen photographers while this was true for just over a quarter of the others (27%). So some photojournalists do feel that amateur or citizen photographers constitute a risk to their livelihoods, but most feel either neutral about it or think this is a positive development.

Copyright theft is frequent, with most photographers having their images used without authorisation and only a few able to extract payment for this use.

3.7 The Future

The disruption of the digital era has produced many profound changes in photographers' work patterns, income sources, technology use, and perhaps ethical principles. Many photographers who took part in this study are nevertheless satisfied with the value of their work and remain optimistic about the future. More than two-thirds felt there were more opportunities than ever to tell stories with photographs, almost three-quarters of the 1,556 respondents agreed their profession was valued, and at least half felt generally positive about the future of photography.

As usual, there are variations across this cohort. Using an ordered logit regression analysis (see Table 34), we explored the relative influence of gender, age, continent of abode, and self-employment status upon feelings about the future. The results suggest that gender has no particular impact on how positive photographers feel about the future, net of the effects of other factors, but age was important: the data indicate that the older photographers in this study were less likely to say things are getting better. Self-employed photographers were marginally more positive about the future, net of the influence of age, gender, and region, though the employment status effect is at the borderline of being considered statistically significant. Regions, however, do matter to outlook on the future, net of gender, age, and employment status effects. Asian photographers in the study, as well as those from Central and South America, have more positive outlooks than respondents from Europe (the contrast category).

Table 34: Being positive about the future

	Regression coefficient	*p-value*
Gender (female)	-0.051	0.701
Age in years	-0.026	0.000
Self-employed	0.17	0.071
Europe (reference group)	0.00	-
S./Cent. America + Caribbean	0.40	0.009
Asia (with Oceana, Mid East)	0.34	0.005
Africa	0.25	0.366
N. America + Australasia	0.25	0.105

N = 1547. Model pseudo-r2 = 0.011. Model is an ordered logistic regression where coefficients represent influences upon being more likely to have positive views about the future, in financial terms.

Most of the photographers surveyed were keenly aware, however, that there are great risks with this occupation. These risks, they think, are likely to increase in the future. Only one in ten of our respondents thought that risk might decline over the next five years. For the rest, there were only greater levels of risk ahead. Photographers from South and Central America, who you will recall already reported that they face a high risk of physical danger at work (see section 3.6), were unsurprisingly the most pessimistic about their prospects in this regard. Almost two-thirds of our respondents from this region expected things to get worse in terms of risk (see Table 35). Even the majority of European and Asian photographers in our sample believed risk would rise over the next five years.

Table 35: Risks in five years compared to now, regional analysis

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Risks in 5 years' time compared to now will…?					
Reduce	8.5%	8.3%	18.2%	15%	3.1%
No great change	39.5%	28.1%	29.5%	23%	34.8%
Increase	52.1%	63.5%	52.3%	63%	62.1%
Total	816	178	346	48	161

Cramer's V = 0.129, p-value = 0.000

Age, by contrast, was not strongly linked to views about changes in physical risks, as Figure 10 indicates. Other than the very oldest group (60 years and above) there was consensus among the rest of the sample that photography and risk will go together more than ever in the years ahead.

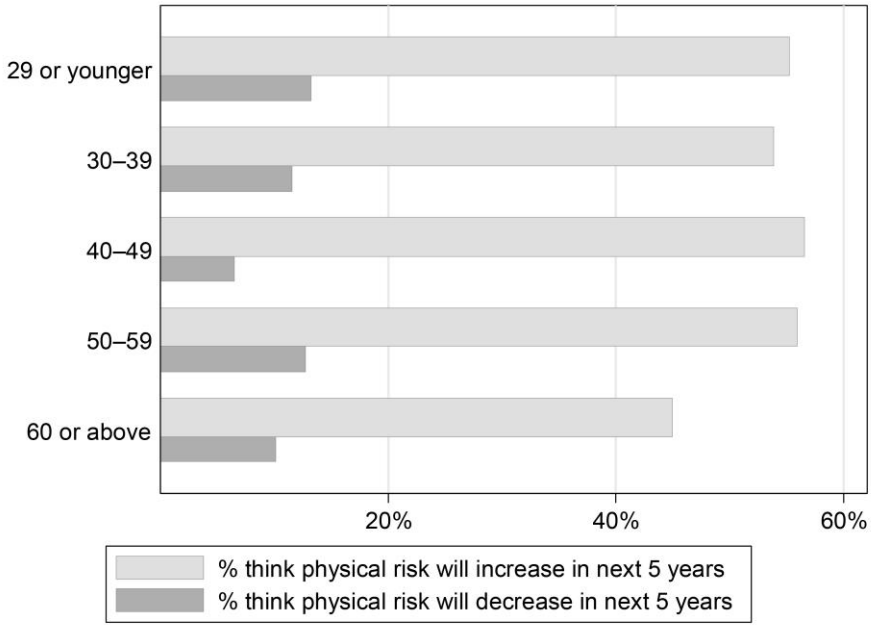


Figure 10: Physical risk over the next five years by age

There was a considerable degree of stress among the respondents about the rapidity (and expense) with which image-oriented technology was evolving. More than half of the sample felt periodically overwhelmed by the pace of technological change, with a significant number (12%) feeling perpetually at sea in this area. From their responses, male, self-employed photographers coped slightly better than female photographers or those photographers who were employed by companies.

Surprisingly, there seemed to be no significant age differential around coping with technology. The average age of photographers in this sample who 'never' felt overwhelmed by technology was 40.6 years old. Those who were 'sometimes' overwhelmed averaged 41.7 years, the 'mostly' overwhelmed averaged 41.4, and the photographers who were 'always' overwhelmed averaged 41.8. So there was some difference in the direction one would expect, but this was only marginal statistically speaking.

Asked if photographers wished they stayed longer in places so they could understand their subjects better, a very high percentage of the sample (almost three-quarters) felt this was true, with only 9% never feeling this was the case. From the data it is evident a high proportion of photographers, particularly younger ones, felt their visits to places while working were transitory and shallow. Overall, more than 90% felt this sentiment from time to time. North Americans were generally the least interested in understanding places they work in better, and Asians most keen to stay longer and understand more.

Asked if they felt photography was valued as an occupation, more than 70% of the respondents said they thought was true at least some of the time. Self-employed photographers in the study felt less valued than their employed colleagues.

Regionally, there were some significant differences in perception. Less than half of the photographers surveyed from Central and South America, North America, and Europe said they felt valued 'mostly' or 'always', with Europe (39%) lower than both North America (44%) and Central and South America (43%). The Asian photographers in the study were very positive about this aspect, with 72% feeling their work and profession were valued 'mostly' or 'always'.

In one important aspect, the digital revolution is regarded favourably. About 80% of the respondents believed that the opportunities to tell stories differently would improve in the years ahead, with two-thirds convinced this would be the case. The male photographers in this sample were slightly more positive about this than their female counterparts and employed photographers were more upbeat than the self-employed group.

The European photographers in the study were the most pessimistic about opportunities to tell stories with images in the digital age, with 60% saying they felt it was 'mostly' or 'always' true that there would be better opportunities in the future. By contrast, photographers who felt there were more opportunities came from Africa (79% felt this was 'mostly' or 'always' true), Asia (77%), North America (68%), and Central and South America (67%).

Asked whether they would like their children to become photographers, there was some uncertainty. Roughly one in three said 'yes'. Younger photographers were more likely to agree and male photographers marginally more than women. Photographers in employment were more likely to say 'no' compared to self-employed, but both had the same proportion who said 'yes'.

The North American group was the most positive on this question, with 27% of them saying 'yes' they would want their children to become photographers. This compared to 14% of Asian and Central and South American respondents, 17% of Europeans, and 19% of the African photographers.

When it came to answering with a definite 'no', Central and South Americans were strongest in this regard, with 41% giving a negative response while 36% of the Asian respondents, 35% of the Africans, 27% of the Europeans, and 19% of the North Americans were also negative.

Asked specifically about the future of photography, more than half of the respondents said they felt 'mostly' or 'always' positive about their profession, with 72% saying they felt this at least occasionally. Only 5% of the 1,556 photographers surveyed said they 'never' felt positive about the future of photography.

Male photographers were slightly more positive than females, and African and Asian photographers were the most optimistic, with close to 70% saying they felt positive 'mostly' or 'always'. Europeans were the most pessimistic, with 7% saying they 'never' felt positive about the future of

photography compared to 4% in North America and Asia, 2% in Central and South America, and less than 1% of African photographers.

3.8 Snap Shots

There are clear differences within and between the different groups of photographers who have participated in this survey. In order to get a better sense of some of these issues, we have selected a few 'snap shots' to highlight them. These have been gathered together below to give the typical experience of photographers from different parts of the world. They are not intended to be exhaustive, but are an illustrative spotlight on some of the data collected during the survey. This is followed in the section 4, Photographers' Voices, by some of the comments photographers themselves directed to the researchers about their work and ideas.

Women Photographers (Snap Shot 1)

Data concerning women photographers can be found throughout this study (see for instance Work Patterns and Rewards, or Education and Training), but the researchers did feel that a specific focus would be valuable. If photographers generally are under-researched, we found no research whatsoever on women photographers specifically. With a cohort of more than 200 professional woman photographers in this sample, this was a historic opportunity to present data that have not been gathered or analysed previously.

Data in the previous sections have already indicated that there are many important differences between men photographers, who are the overwhelming majority in this industry, and women photographers. We saw (in the Work Patterns and Rewards section) the stark difference in gender terms between the employment status of men and women in the industry.

Of the 236 women photographers who participated in this study, 82% said they were university educated (compared to 69% of males).

More females (75%) in the study earned less than $29,999 per year compared to males (70%) and more women earned less than $9,999 (42%) compared to men (34%). Many more men (5%) earn $80,000 or more, compared to women (1.5%).

The industry has a very high rate of self-employment, with some 60% of the respondents indicating they were self-employed. For women photographers in this study, this rises to 86% who are self-employed. Correspondingly, women in this sample were far less likely to be employed by large media companies (7%) compared to men (22%).

Women were more likely to call themselves 'documentary photographers', 'visual storytellers', or 'multimedia journalists' than their male counterparts and less likely to call themselves 'press photographers'.

The women photographers were less likely to be doing news photography than men, though this was marginal (men 65%, women 63%).

Twice the number of men (33%) photograph sport compared to women (16%), while far more men (29%) take environment-oriented pictures than women (17%).

When it comes to control over the editing, production, and publication of images after submission, the female photographers in this study were generally in a stronger position as more than half (51%) felt they had control of this aspect compared to 39% of men.

Overall, then, women photographers in this study tended to be self-employed, more versatile (in terms of different technologies such as video and multimedia), and less focused on news photography than their male counterparts. Women made up a disproportionately large section of the lower paid groups and a disproportionately small section of the best paid of the photographers globally.

They were exposed to slightly less risk of physical injury or death in their work but had greater control of their choice of subjects and more say over the editing and production processes than men.

India (Snap Shot 2)

The researchers felt that India would be a useful guide to how developments were being experienced in the global South and had the hypothesis that traditional legacy media businesses had not transformed as rapidly in these areas compared to other parts of the world. Various reports and research suggest this is certainly the case in India.

Buoyed by a growing vernacular press and rising literacy, the Indian newspaper printing industry is thriving in contrast to the woes experienced in many developed countries (Mallet, 2013). Print in India takes the lion's share of media advertising – 46% ($2.4bn) of the total advertising pie, according to a report published by the Federation of Indian Chambers of Commerce and Industry and KPMG (Mallet, 2013). Between 2005 and 2010, the number of paid-for Indian daily newspaper titles surged 44% to 2,700, more than any other country in the world according to the World Association of Newspapers (*The Economist*, 2010). At the same time, internet coverage, particularly in the rural areas where print is growing fastest, remains scarce and has not impacted too heavily on the still booming print sector.

There were fifty-three Indian photographers included in this survey or around 3.5% of the entire sample. Further reasons to focus on India were that a reasonably high proportion of the Indian photographers approached to participate in this study agreed to do so (25%) and, with English as a first or second language for many, difficulties around interpretation or comprehension of the survey questions were assumed to be minimal.

The data suggest that India has a much higher rate of formal, full-time employment for photographers than many countries and, correspondingly, a much lower rate of self-employment. The average across the entire sample was that around 60% of photographers were self-employed and around 20% were employed by large companies. For illustrative purposes we contrast India's figures with those of photographers from the United States of America (USA) (Table 36) that indicate that close to 40% are employed by large companies and only 45% are self-employed photographers. This suggests a very different pattern of employment in India.

Table 36: Type of employment of photographers in India/USA

	India	USA
Employment arrangement as a photographer?		
Self-employed	45%	69%
Media collective	5%	5%
Employee, large company, long term	38%	19%
Employee, large company, short term	4%	0%
Employee, small company, long term	5%	6%
Employee, small company, short term	2%	1%
Not employed in photography	0%	1%
Total	55	86
Cramer's V = 0.290, p-value = 0.066		

North American respondents had much higher levels of self-employment and much lower rates of formal employment than their Indian counterparts. Membership of photographic collectives or co-operatives for both India and North America were also considerably lower than the sample average.

If one looks at the type of organisation that employs photographers in India (Table 37), more variations are evident. Here we see that print-only newspapers continue to be an important employer in the Indian media market whereas for North America this has fallen away almost completely (only one photographer out of 86 who filled in the survey was in this category).

Table 37: Type of organisation employing photographers in India/USA

	India	USA
Employment arrangement as a photographer?		
Newspaper (print only)	11%	1%
Newspaper (with website)	20%	27%
Magazine (print only)	5%	0%
Magazine (with website)	7%	3%
Online news site	2%	3%
News agency	13%	3%
Photo agency	5%	5%
NGO	2%	1%
Other	4%	6%
Not employed by an organisation	31%	50%
Total	55	86
Cramer's V = 0.381, p-value = 0.016		

By contrast 11% of Indian photographers work for newspapers that don't yet have online editions. Almost a third of Indian photographers surveyed are employed by newspaper companies. Magazine publishers both with and without an online platform are also significant employers in India for photographers, whereas online news sites employed only one of the Indian cohort. These proportions also contrast quite significantly with the sample as a whole but also with the North American group. India has a relatively high proportion of photographers working for news or photo agencies, twice that of their North American counterparts.

Nevertheless, despite the relatively disadvantaged objective characteristics experienced by Indian photographers, our survey responses also revealed that Indian respondents tended generally to have a more optimistic outlook towards the future of photography.

For instance, Indian respondents were more likely to agree that photography is valued, that photography offers more opportunities than ever to tell stories, and that they felt positive about the future of photography. A number of regression models were used to explore this issue because it is plausible that the other differences between respondents that characterise the Indian sub-sample might be the source of this attitudinal difference. However, the pattern of optimism amongst Indian respondents held firm after controlling for gender, age, employment contract, and type of photography usually undertaken. Put differently, photographers with similar circumstances in terms of gender, age, employment contract, and type of work are generally more likely to be optimistic about the future if they are from India than if they are not.

Europe vs North America (Snap Shot 3)

Photographers from Europe and North America (including Canada) represent a significant portion of the total sample of this study. We felt it would be of interest to highlight some of the differences between these two groups in the data. As with the other snap shots, more detail can be taken from the preceding sections where regional analyses are often included within the body of the report. However, here are some details that may be of interest.

The North American sample consisted of 138 photographers, 36 from Canada and 102 from the United States. The European sample was much larger (816 respondents representing more than half of the total sample) and included some large cohorts from different European countries such as Italy (143, the biggest single national group), 79 from Spain, 68 from France, 63 from Germany, and 55 from Holland.

The European photographers included in this study tended to be less well educated than their North American counterparts. As Table 38 illustrates, Europeans were twice as likely as North Americans to have no formal qualifications, while almost 80% of the North American photographers had university degrees compared to 65% of the Europeans.

Table 38: Education qualifications by country lived in

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Educational qualifications held?					
No formal qualifications	3%	3%	1%	2%	1%
School level only	9%	3%	6%	4%	7%
Post-school/vocational	23%	21%	14%	17%	12%
University level	65%	73%	79%	77%	80%
Total	814	178	346	48	161

Cramer's V = 0.091, p-value = 0.092

A much higher proportion of the European respondents had received in-house training (23%) compared to the North American respondents (15%).

Looking at the employment arrangements of the European and North American photographers who participated in this survey, some significant differences and some important similarities are evident (Table 39). About the same proportion of Europeans and North Americans are self-employed (67–9%), both of which are higher than the average globally (which is around 60%).

More Europeans work in collectives and co-operatives (though both are below the average) and a much greater proportion of Americans are employed by large media companies (19% as opposed to 12% in Europe).

Table 39: Employment arrangement, by country lived in

	Europe	S./Cent. America and Caribbean	Asia (with Oceana, Mid East)	Africa	N. America
Employment arrangement as a photographer?					
Self-employed	69%	48%	41%	50%	67%
Media collective	8%	12%	10%	10%	6%
Employee:					
- Large company, long term	12%	28%	36%	21%	19%
- Large company, short term	2%	4%	5%	2%	1%
- Small company, long term	5%	5%	4%	4%	6%
- Small company, short term	2%	2%	2%	2%	1%
Not emp. in photography	2%	1%	3%	10%	1%
Total	814	178	346	48	161

Cramer's V = 0.091, p-value = 0.000

Newspapers employ the smallest proportion of photographers in Europe compared to other regions, but photo agencies employ the highest number. About 25% of the North American respondents said they worked for either photo or news agencies compared to 38% in Europe. Just over half of European photographers focus on news (56%), while this is true of close to 70% of the North American group.

Just over 30% of the European respondents are required to shoot video as well as stills, while in North America this is slightly higher at 35%. Both North Americans (66%) and Europeans (64%) said they were generally happy or very happy with their mix of assignments.

The Effect of Age (Snap Shot 4)

People associated with the photography business understand there was a sea change in the industry that took place largely during the 1990s, namely the shift from analogue to digital. Photographers who are younger than 20 at the time of this study (i.e. were born in or after 1995) can be said to be part of the digital generation of photographers, while those born before will have received the bulk of their training and early career in the darkrooms and picture departments of the analogue era.

As it turns out, roughly half of the photographers who participated in this survey were 40 years old or above and the other half were 39 or below. The age of photographers certainly appears to be a strong indicator of their attitude to things like social media use, ethics, and the level of risk to which they are exposed, though there doesn't seem to be a clear moment or divide that separates the analogue from the digital photographic generations. In

common with almost every occupation, the youngest in this study earned the least and the oldest the most, on average.

Younger photographers are also more likely to enhance their digital images, as Table 40 illustrates. More of the older photographers in the survey say they 'never' enhance their images while younger photographers were more likely to say they enhance images 'often' or 'always'. These data may well contain an indicator of generational difference, with 13% of photographers younger than 39 'never' enhancing digital images, compared to 42% of photographers aged 40 and above.

Table 40: Likelihood of enhancing digital images by age

	29 or younger	30–39	40–49	50–59	60 or above
Enhance digital images?					
Never	6%	7%	11%	14%	16%
Sometimes	31%	32%	34%	33%	39%
About half the time	9%	9%	6%	3%	6%
Often	24%	20%	20%	29%	14%
Always	30%	32%	29%	21%	25%
Total	219	546	479	243	69

Cramer's V = 0.083, p-value = 0.000

It was noticeable from our data that women photographers tended to be younger than their male counterparts, as Table 41 shows. While there are a handful of men younger than 19, in both the 20–29 category and in the 30–39 category, there are proportionally more women. However, the mean estimated age of the men and women in this study is roughly the same.

Table 41: Age of photographers, by gender

	Male	Female
19 or younger	0.3%	0%
20–29	13.4%	16.5%
30–39	34.5%	38.1%
40–49	31.1%	29.2%
50–59	16.2%	12.3%
60–69	4.2%	3.8%
70+	0.3%	0%
N	1318	236

Table excludes 2 records of 'other' gender

4. Photographers' Voices

In the survey, the 1,556 participating photographers were given the opportunity to comment freely on anything they thought was important about their profession. This included questions they thought would have been illustrative about the state of photography and photojournalism or just summaries of their attitudes. Here is a small selection of the more than 300 responses to this open-ended question, 'so what is important to you?'

What Photographers Should Be Doing

- We are living in the most fascinating time for communication. Wallow in its potential. Work extremely hard. Make it brilliant. There is limitless potential if one is willing to expand beyond the naysayers.
- Photographers should join [together] more, communicate more, not be overcome. Photography is competitive, and photographers make it vulgar, leaving room for amateur photographers to exhibit their work in the media and in the low cost agencies. This is the fault of photographers, but much of it is the agencies and owners of newspapers and magazines that only seek profit forgetting the human part.
- Photographers must band together to deal with the problem of protecting the rights to one's images once they are on the internet through publication in news media or contests, and the problem that images are downloadable (for free) by anyone from any media site where they are published. This, to me, is one of the biggest problems for photographers. All major magazines and newspapers should have websites that prevent published photos from being downloaded to one's desktop.
- Photographers need to get together to protect the rights to their images, as well as their Constitutional rights to take photos of people in all public places and publish those photos. The movement [in California] to legally ban photographs of celebrities' children is both unconstitutional and elitist. The public must also be taught that downloading a photo from anywhere on the internet is stealing, just as it's stealing to pirate videos. This is putting real photographers out of work.
- We need a unified advocating body that holds clients to standards of pay and treatment. We need strong organisations to protect us from corporations who would put us at risk and not pay us enough to feed ourselves.

Photography Today

- I believe photography is at a crossroads. At the moment there are no radical examples of a new kind of photography. I believe this will be resolved in the next decade or so.
- There's too much photography around. We are overloaded with clichéd or mediocre photography.
- I fear the rampant wave of ‘photographer stars’ thanks to the new technologies emerging every day that has led some to manipulate photos. It's sad, but I think we will survive.
- As a freelance living 100% off photography, my main objective is to be able to keep going with my personal work, without getting lost doing assignments. I want a good balance between projects and money ... and to be able to do those projects.
- I can see that there are so many 'isms' in photography nowadays. Personal clashes are increasing a lot. It's almost impossible to prosper without oiling some powerful people. There should be some sections [of the questionnaire] regarding 'morality and professionalism'. It has become a burning issue at my place.
- Good photojournalism and documentary photography is now more a part of art and the gallery system than news media.
- Photography has become very easy in the minds of most people. Many of them don't see the work behind each picture we shoot, each story we tell as professional photographers. As I love to say: ‘If you want to make money in photography, don't become a photographer. We are not the ones who benefit from our work.’
- I think the most frustrating thing for me is how companies and organisations only pay attention to how many followers someone has on social media. Corporations who do not have a large established social media presence don't necessarily care about the aesthetics of photography so much as they care about how many thousands of followers someone has on Instagram.
- As a society we are trained to copy the ideas of people that come before us … especially creatively. I think with the rise of Instagram and social media people are beginning to photograph ‘for’ social media, simplifying images so they are easier to read on a screen, copying other successful style models. Toning has become a click of a single button with no consideration for the integrity of the image.
- Photographers are intimidated by people with large social media popularity bases. I know amazing photographers who have not been considered for a job because they don't have that ‘fan’ base ... I have even fallen victim to this as well. I would be curious to see how many other people have/have not got work based on this.

Photography in the Future

- Commercial photography will blossom as the need for imagery continues to grow.
- There should be a discussion on what the future of print journalism holds for us. Should the press ditch print and go totally online? Why isn't online journalism making a profit? There's a worldwide demand for quality photos but photographers are generally struggling to make a living.
- I believe one way forward for photographers is to embrace other mediums and find ways to mesh their skills as a photographer with interactive and multimedia platforms.
- I am positive about the value and future of photography. My concern and worry is the value and future of photographers.
- The archiving of photography is important. With digital imagery there are now often no physical copies. In 20 years, 30 years time, a whole period of time will be lost – remember the zip drive? Even if people still have the digital files there is a chance that the software / technology won't be able to read it – will JPEG or TIFFS be a common file format? Irrespective of the historical context, your career work could be lost!

Things to Think about

- [The researchers] should address the evolving media landscape where photojournalism is published, how the classic magazine photo essay/story is dying and being replaced by online photo galleries generated by computers or over-worked online editors.
- Do you think the relationship between photographers and editors has deteriorated?
- The price of equipment!
- Freedom of the press being threatened.
- How we relate to creativity and to a personally developed vision, for these skills are part of survival. Also how the art market and visual output is forging a certain outcome that is not necessarily something that photographers can influence. We're as much instruments in this market as depending upon it and not always provided with what would serve best to our benefit and future.
- [The researchers should be] asking questions that'd imply more than just which technical 'instruments' or tools/media we use; there's a lot of psychology that plays a part in success and also in creating space for personal experience and outcome. Money alone doesn't measure whether one enjoys what one is doing, nor decides if one is truly successful.

- Asking [in the study] whether photographers have an understanding of media law and copyright would have been interesting. It would be fascinating to see the percentage of professionals' [sole income from photography] versus amateurs' knowledge on the subject of photography in public places and the difference between commercial and editorial pictures. Children and photography is also an interesting aspect most photographers are uneducated on!
- The quality of the image has improved [since the change to digital] but has the quality of the actual picture/photographer improved or deteriorated as a result? Do we rely too much on the technological advances of the camera? If so, do the technological improvements of the camera only invite citizen photography to equal and then blur the line between professional and amateur to the point that photographers will only exist in specialist fields?

5. Conclusions

This report provides an insight into the working conditions, practices, and attitudes of an important group of media practitioners in the 21st century. Few other occupations have been as directly affected by the digital revolution as professional photographers, yet they have rarely been the subjects of study. Disruption has increased the array of tools and platforms, but may have exacerbated the sense of 'precarity' and risk in work practices. Our data, provided by the survey of 1,556 respondents from more than 100 countries who entered the 2015 World Press Photo Contest, offers one of the first global assessments of the lives and livelihoods of professional photographers. Our questionnaire achieved an above average response rate and although responses to it revealed some limitations to the questions used, we are confident in general that our data provide some solid statistical evidence about contemporary photography. The hope is that we can take this professional snap shot of the industry each year to see how these current circumstances persist or change.

While there are considerable variations evident, if we use modal characteristics as a guide, we can draw a picture of the average photojournalist in 2015. He is a self-employed man aged 30–50, earning less than $30,000 a year from photography, with supplementary income from other sources. He is very well educated, and is most likely to rely upon media companies (newspapers and magazines with both print and online distribution) to earn a living. He will usually work alone, occasionally joining a multimedia team, and, if necessary, shooting video or writing text.

Professional photographers do not work for the financial rewards alone. This study shows that most photographers earn less than US $40,000 per year, with only a handful reaching the heights of an annual income of $100,000. The majority have also been the victims of unauthorised use of their images. Nonetheless, most photographers say they are managing financially or are feeling good about their financial situation in spite of the difficult global environment of the past few years.

Media organisations that operate newspapers and magazines with online platforms as well as print distribution are the chief source of income for photojournalists, especially in Asia and Africa. In Europe and North America, where legacy media faces more challenges, this is less evident. As much as these media organisations are trying to diversify both products and revenue, there has been unprecedented shrinkage of formal employment among photojournalists in the developed world and, unsurprisingly, higher levels of self-employment and increased levels of concern about the future. There is, therefore, a pronounced difference between photojournalists in the developing world and those in the developed world. Those that do still have jobs with the legacy companies often do so under short-term contracts or are being asked to acquire new, additional skills.

We see from the 2015 survey data that diversification is being demanded of many photojournalists. In addition to changing job descriptions and responsibilities in a corporate setting, photojournalists are seeking new editorial partners in the charity and corporate sectors, as well as undertaking a whole range of mostly photography-related activities like teaching in colleges, pitching for grants and exhibitions, and selling prints via their social media sites to supplement their commissions. They are active users of social media, and three-quarters of our respondents have seen both direct and indirect benefits from this effort.

Many photojournalists are conceptualising and carrying out their own projects. While this is stressful, it can also be tremendously rewarding. A few are taking on work that has nothing to do with photography, but their visual training can still be productively employed in a range of settings. And the persistence of film cameras, used by 14% of respondents, shows that, rather like vinyl in the music industry, traditional technologies are being retooled in the digital era as their particular qualities are appreciated by new audiences.

What was striking from the survey, and what contrasts strongly with the popular discourse about the death of photography and photographers as a category, is that there is a great deal of enjoyment, satisfaction, and optimism in the work, lifestyle, and future that photography provides. Photographers feel valued in their communities. They feel their work is important. They are positive about the new opportunities that visual storytelling offers. They feel satisfaction with the creativity and variety of the work. And, notwithstanding the low earnings, they mostly feel better off now than five years ago, and they expect things to continue this way for the next five years. Whatever the challenges – and they abound – this is not a story of professional anguish and decay but one of diversification, resilience, and of hope.

One of the greatest challenges for photography comes in the realm of ethics. With the veracity of visual images constantly under scrutiny in a world where the abundance of user-generated content necessitates new verification practices, the credibility of professional photography cannot be assumed. Photography has many purposes, but if documentary photography and photojournalism want to be able to provide images that can serve as evidence, there have to be accepted codes and practices to underwrite that status.

Our respondents overwhelmingly considered professional ethics to be important. A prominent ethical challenge in the digital age stems from the fact that every in-camera file requires processing in order for any image to exist. Although the darkroom analogy is still anachronistically invoked, it can no longer provide credible insight into the image-making procedures that flow from the fact that digital cameras now capture data rather than pictures. This means enhancement is unavoidably part and parcel of producing a digital photograph. By itself, however, enhancement is not manipulation, because manipulation involves altering the material content of an image by

adding or subtracting elements. Although there need to be ongoing discussions about possible limits to the levels of enhancement if photographs are to be used for particular purposes, establishing clear guidelines in what is inherently an aesthetic or interpretive area will not be possible.

The more urgent issue for news-oriented photography is to strengthen the prohibitions against manipulation and staging. The survey found a significant number of photographers engaged in these practices. Three-quarters of photographers did not manipulate images, but 27% of photographers admitted altering the content of images (other than by cropping) at least sometimes. When asked if they stage images (i.e. ask subjects to pose, repeat actions, or wait for you to shoot the picture), 36% said never but 52% said sometimes (with a further 12% saying they did so at least half the time). Prohibitions cannot be secured by codes of ethics alone, but when one-quarter say they follow their company's guidelines but 57% say they use their own standards, there is clearly room for debate and education.

One of the most important findings of this study is the high level of risk that many photojournalists face carrying out their assignments and commissions. At its most immediate, this is the risk of personal, physical harm, or death that comes with covering news that so often involves violence, natural disaster, war, or conflict in unstable places. Photojournalists in Central and South America appear to be among the most vulnerable, but more than 90% of the photojournalists surveyed in this study admitted that at some point during their working routines they were afraid of getting hurt.

Attitudes to change in photography were quite varied. Many respondents were concerned about the future of photography and issues such as technological change and editorial control. However, many other respondents were remarkably optimistic about prospects for the immediate future. These are clearly uncertain times for photography and its future, and our intention is to repeat the survey study in the future to evaluate evidence of change over time.

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Appendix 1:
Sampling, Survey Quality, and Analytical Methods

Sampling and Survey Quality

All surveys have aspects that weaken their purview and affect the degree to which inferences can be drawn or conclusions taken. We were fortunate with this study to have reached more than 1,500 people, a sample size that supports a range of productive analyses.

With certain caveats, the survey results can reasonably be expected to be representative of the population of professional photojournalists. This expectation relies upon three assumptions which it is important to communicate clearly. First, it is anticipated that biases of over-representation or under-representation of certain categories of professional photographers can reasonably be compensated for by statistical analysis adjustments (e.g. the uneven regional coverage of respondents can be adjusted for by presenting statistical results that condition upon region, in analyses where region may be an important consideration). Second, it is anticipated that the gap between the target respondents (5,158 WPPh competition entrants), and the questionnaire completions (1,556), is not systematically related to factors that are important to the analysis and are not otherwise known about (we note below some known biases in response patterns that must be borne in mind when reviewing results). Third, it is anticipated that information about patterns within the global community of professional photographers can reasonably be inferred from information about patterns amongst WPPh competition entrants. This might not seem to follow automatically, but it is a plausible claim given the position of WPPh across the world.

Certain known biases in the completion of questionnaires should be acknowledged. First, some of the larger agencies and publications ask an administrator or coordinator to help compile and complete the WPPh competition entries of dozens of photographers attached to that agency. In some cases, there are no decent records of the photographers themselves, who may be hired in the field on a personal recommendation and who don't have a fixed office address or contact point. Some will have taken a day rate in a conflict zone and would not have submitted their own photographs to the competition. Accordingly when the questionnaire was publicised to the individual who was responsible for submitting the entries to the WPPh awards, we have no way of telling whether each photographer contributing to the submission was subsequently contacted or invited to participate in the questionnaire. This could mean that the views of some of the larger agencies, such as AP or the *New York Times*, may not have been fully represented as only a small number of their total teams may have taken part. Checking back during the analysis process, we compared the 500 entries submitted by agency administrators with the 5,158 individual photographers' entries. Only a very small number (around 5%) of the photographers in the administrator

entries had been sent the survey, the rest had not. Of the 115 photographers entered by the AP, for instance, only a few would have participated in the survey. Having said this, this survey was initially piloted at Reuters in London, precisely one of the big photo organisations referred to above, and the preliminary results predicted our overall findings.

In addition, this survey was conducted in English. While it is hoped to branch out to include other languages in the future – the WPPh photo award system allows entries in several languages, including French, Russian, and Chinese – this was not possible with this first run of the questionnaire. This means that, while we have a fairly significant contingent of Chinese photographers (62), they represent only a small fraction (less than 10%) of the 669 who entered the competition. Given the size and diversity of a country like China, this may limit the degree to which the data can be generalised.

There were limitations to the data quality within the survey in some respects, some of which may have been related to the bias towards English speakers. For instance, respondents were asked to select a type of photographer that best described them such as 'visual storyteller', 'multimedia journalist', or 'documentary photographer'. In the translation process, all these options may be vulnerable to misinterpretation or misunderstanding. Respondents were also asked to indicate what work they 'mainly' do, and in one question they chose three or four options when only one or two were expected. Similarly there appeared to be uncertainty among respondents around what 'self-employed' meant: if, for example, a freelance photographer did most of their work for one client, like an agency, did this constitute self-employment? For follow-up studies – and the plan is to do this annually – the wording and definitions within the study will be revisited to ensure better clarity in some of the areas.

WPPh received only a small number of entries from Africa and consequentially there are only a few Africans represented in this survey, most of them from either end of the continent (Egypt or South Africa). This is likely due to low levels of demand for professional photojournalism in many African countries. The limited market means fewer active photographers in the field. We realise the small African cohort probably restricts the quality of our evidence about photography in Africa, but we note WPPh's efforts to broaden their African participation and hope this will mean larger numbers of African photographers entering the competition and joining our sample pool in the future.

Respondents were asked their nationality, place of residence, and country where they are based in the early part of the questionnaire. There were several cases of multiple nationalities (the first mentioned was used) as well as nationalities of countries that have not been formally recognised or are no longer in existence (such as Catalonia, Kosovo, or Yugoslavia). We have tried to resolve these by assigning unofficial territories to their official host

(Kosovo is included in Serbia, for instance), but we realise this is not ideal and touches on some strongly-felt politics.

Some respondents indicated they worked in multiple countries and regions, sometimes too many to define or list. In the analysis, we used 'country where you are based' as the key identifier and found that in a high degree of cases this correlated with nationality and place of work.

Finally, it is possible that the photographers who felt least optimistic about the future were the ones who failed to fill in or submit the questionnaire. This would naturally skew the result in favour of the overall positivity that we found. But the high number of respondents from so many countries together with the high degree of unanimity on these issues gives us the confidence to extrapolate the findings beyond this sample.

Analytical Methods

The majority of results are reported upon using descriptive statistical techniques that are designed to summarise patterns of difference in one measured variable and how they are related to those in one or more other variable. Cross-tabulations in particular are frequently used which indicate the percentage of respondents who fell into a certain category, typically split according to another factor.

Across the range of survey questions we used cross-tabulations and other similar bivariate techniques to systematically review the extent to which responses on each question varied by the gender, age, continent of residence, employment status of respondents. Additionally, we reviewed many other patterns of association in response to ad hoc evidence or specific research questions, such as in the relationship between employment arrangements and income from photography, and attitudes about the future of, or risks related to, photography. In many instances, we summarise the patterns of association in relevant cross-tabulations by quoting 'association statistics' such as the 'Cramers V' and 'Gamma' values for particular tables of data.

These values, also often called 'correlations', all have similar qualities in that their magnitude ranges from 0 to 1, where a value of 0 indicates no association at all between the two measures, and a value of 1 indicates a perfect correlation or association (i.e. knowing the value of one variable would automatically tell us the value of the other). In survey datasets, association statistics most commonly have a magnitude in the range from 0 to 0.4, and the larger the magnitude, the stronger the pattern of association.

Some additional techniques of analysis, such as using regression models to explore the joint relative effects of several different 'explanatory' variables upon a specific 'outcome' variable of interest, are used at certain points of the text and are elaborated upon at the relevant point. The statistical techniques of analysis used throughout the report follow common conventions and routinely used techniques of analysis. A popular

methodological text that covers most techniques mentioned from the point of view of attitudinal survey research is Blaikie (2003).

Appendix 2:

Survey of French Photographers

Vauclare and Debeauvais (2015) captured data from 6,000 of France's roughly 25,000 professional photographers — working in every field, from fashion and photojournalism to fine art and corporate photography. The study was conducted between December 2013 and December 2014 by the Ministry of Culture and Communication and its Department of Studies, Probability, and Statistics. Some of the key findings (see Sutton, 2015) were as follows:

- *Gender:* 72% male / 28% female
- *Technology:* Nine out of ten respondents use digital equipment primarily; one third still use non-digital technologies as well; 40% also make moving images.
- *Work and Income:*
    - In 1991, 46% of professional photographers were salaried, now only 17% are [*so 83% self-employed*].
    - The number of salaried photojournalists in France has dropped by 40% since 2007.
    - Nine out of ten respondents work alone.
    - In 2013, 43% of respondents made less than €15,000 (~$16,500), 31% made between €15,000 and €29,999 (~$33,000), and 24% made over €30,000 [*3/4 less than $33,000*].
    - Eight out of ten respondents make money from multiple sectors of the photography market; the most popular revenue stream is corporate photography (executive portraits, event photography, conference materials, annual reports, etc.).
    - 59% of respondents said photography was their main source of revenue in 2013, but 55% said their revenue from photography had dropped over the past three years.
- *Attitude:* 58% of respondents said digital technology has had a positive impact on the field. While 63% have a pessimistic or somewhat pessimistic view for the future of the field – only 25% positive – only 6% plan to change professions.

About the Authors

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