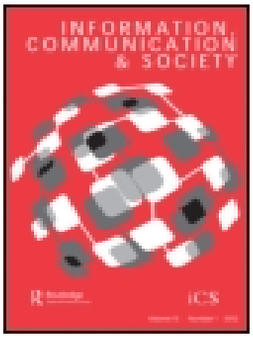

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Information, Communication & Society

ISSN: 1369-118X (Print) 1468-4462 (Online) Journal homepage: http://www.tandfonline.com/loi/rics20

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To cite this article: Gian Marco Campagnolo, Evi Giannatou, Michael Franklin, James Stewart & Robin Williams (2018): Revolution remixed? The emergence of Open Content Film-making as a viable component within the mainstream film industry, Information, Communication & Society, DOI: 10.1080/1369118X.2018.1465109

To link to this article: https://doi.org/10.1080/1369118X.2018.1465109

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Published online: 14 May 2018.

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INFORMATION, COMMUNICATION & SOCIETY, 2018
https://doi.org/10.1080/1369118X.2018.1465109

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Revolution remixed? The emergence of Open Content Film-making as a viable component within the mainstream film industry

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ABSTRACT

Our previous study of the Open Content Film-making (OCF) community [author paper (submitted) Revolution Postponed? Tracing the development and limitations of open content filmmaking submitted to *Information Communication and Society*] had shown how early expectations that Creative Commons (CC) licences would enable a viable alternative to mainstream film production, comparable to free/libre open source software (FLOSS), were challenged, in particular, by the difficulties experienced in establishing viable livelihoods with OCF. A narrative of the apparent failure of OCF may be premature, however. This paper reports on a subsequent study of how OCF practices became adopted as mundane elements in a film production and distribution system that itself has been, and continues to be, dramatically changed by digitisation. These developments broke down the dichotomy that had been drawn between existing commercial practices and visions of a new system of decentralised, non-proprietary, peer production. First, we show that OCF practices are conceptualised by our informants in relation to the mainstream independent film industry. Second, we account for how OCF tools and practices become adopted within the mainstream independent film production/distribution system. These observations highlight that limiting the scope of investigation (e.g., by only undertaking short term 'snapshot' studies, limited to particular settings or groups) may yield flawed interpretations based on narrow viewpoints and premature judgements. Instead, we flag the need to extend research – both longitudinally and across a range of settings/viewpoints – applying methodological templates from the Biography of Artefacts and Practices perspective (Hyysalo, 2010; Pollock & Williams, 2008).

ARTICLE HISTORY
Received 21 July 2017
Accepted 10 April 2018

KEYWORDS
Digital media; cultural creation/film-making; copyright; open content/open source (FLOSS); Science and Technology Studies; Biography of Artefacts and Practices

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1. Introduction

Our earlier paper (Giannatou et al., 2018) – Revolution Postponed? Tracing the Development and Limitations of Open Content Filmmaking – explored the outcomes of an attempt to create an open content film-making (OCF) movement, based upon the use of Creative Commons (CC) licenses. Here we move the analysis forward to examine the wider community of open and independent film-makers (here identified with the acronym of OCFs). We will focus in particular on their practices in relation to the mainstream independent film industry to highlight the interactions among the two fields and how innovative practices are being appropriated by mainstream industry.

Extrapolated more or less explicitly from studies of free/libre open source software (FLOSS) communities, techno-utopian thinking (Benkler, 2007; Drexler, 2013) had informed the expectation that open source/CC licenses would transform the film industry and many other domains of creative activity (Bledsoe, Coates, & FitzGerald, 2007). Proponents of FLOSS managed to establish a thriving model for software development across many application fields (Subramaniam et al., 2009), that sustained itself alongside commercial supply (Midha & Palvia, 2012; Mockus, Fielding, & Herbsleb, 2002). As our previous paper showed, OCFs have struggled to find ways of making a living (or for firms, of making a profit) with the open film. This stood in sharp contrast to the success of FLOSS in a growing number of areas. Viewed on this basis, OCF seems on the first inspection to have failed: it is an instance of the collapse of the techno-utopian project. In the short term, this frustrated visions that open film would compete with the established film production/distribution models and would transform the film sector. However, this analytical template – typically revolving around deterministic models of technology-driven social change (Berry, 2008) – has a number of shortcomings.

OCF projects are rare. An approach capable of tracing the phenomenon's integration with broader influences is required. By placing the practices of the independent film sector centre stage, a different understanding becomes possible. First, the majority of practitioners do not make a profitable living from OCF: it is considered a lifestyle business. Second, as this paper will show, certain CC tools become adopted within the film production/distribution system, albeit in different ways and different locations than anticipated.

Rather than start with particular presumptions about OCF, extrapolated more or less explicitly from FLOSS, we unbundle OCF practices and tools from the imaginaries of their use (Hyysalo, 2010) and see explore how they offer a pool of capabilities for content producers and distributors. This paper thereby examines the ongoing processes through which particular groups identified opportunities to exploit OCF tools within mainstream practices through an extended process of social learning (Sørensen, 1996). The gradual and selective appropriation of OCF elements illustrates the domestication and mainstreaming (indeed banalisation) of OCF. We examine these developments in the context in which the film industry is being reconfigured in the face of further disruptive digitisation.

The paper is structured as follows. In the next section, we focus on the literature on FLOSS practices and identify gaps that make it ill-suited for understanding OCF. We then offer a framework – the Biography of Artefacts and Practices (BoAP) (Hyysalo, 2010; Pollock & Williams, 2008) – that enables OCF to be analysed as part of the

development of the wider film-making industry and captures linkages between the two. The empirical section is divided into two parts. In the first, based on interview data, we explore the interplay between the mainstream industry and OCF by reporting how our OCFs articulate their horizon of opportunities also in relation with the mainstream film industry. In the second part, drawing also on the experience of one of the co-authors and some wider literature, we show how elements of the OCF armoury are taken up by the mainstream industry. In our discussion, we focus on the paper's theoretical contribution in correcting paradoxical misreading of the significance of OCF yielded by studies limited in terms of their scope, duration, and viewpoints explored.

2. Literature review

In this section, we consider existing scholarship surrounding FLOSS, particularly regarding the success of FLOSS projects, and carefully assess the extent to which this can contribute to an understanding of OCF.

Literature investigating the success of FLOSS projects cuts across multiple disciplines and involves a variety of ways of understanding and measuring success (Midha & Palvia, 2012), often developed from information systems project measures (Subramaniam, Sen, & Nelson, 2009). Assessments of success typically include metrics for project popularity or market success, for example, number of releases, downloads, scale of software use i.e., market penetration, and measures of technical achievement or developer activity, for example, modularity and maintenance of source code, effort expended by developers, and number of free contributions. Factors influencing such measures tend to elucidate the organisational structure and management of FLOSS communities, paying attention to knowledge sharing and learning, articulating, for instance, the importance of collective intelligence exploited across different member categories (Martínez-Torres & Diaz-Fernandez, 2014). Amongst the research interrogating implications of success, examinations of FLOSS' capacity to compete and or displace traditional commercial competitors are of particular interest (Mockus et al., 2002).

Studies that address FLOSS projects and evaluate their success in isolation from broader, external market concerns offer limited insight for the study of OCF. Even projects involving non-proprietary tools across the full spread of production, distribution, exhibition, and licensing, cannot be fully understood without reference to frames beyond FLOSS for benchmarking success. Thus recognition that 'most real world systems fall between the two extremes, open-source and proprietary software' (Martínez-Torres & Diaz-Fernandez, 2014, p. 64) is extremely important. Examinations of licence choice are particularly pertinent as selections amongst open source options influence what combinations with other proprietary systems are possible (Midha & Palvia, 2012). It is in these latter subsets of the literature on FLOSS success that useful comparisons, if not parallels, can be drawn with OCF.

The transformative potential of aggregated workflows engendered via distributed open source applications has been shown to be underpinned by the creation of the management tools and leadership features necessary for peer production. For instance, task setting by core developers is critical with regard to project success (Martínez-Torres & Diaz-Fernandez, 2014, p. 65). When considering cultural production, the strict dichotomy between notions of decentralised, non-proprietary, peer production, and traditional formal

practices has been broken down, for example, in the crowd film-making community Wreckamovie (Hjorth, 2014). The company's *Iron Sky* film franchise demonstrates successive crowdfunding achievements,[1] including €253,800 debt financing in 2015.[2] *Iron Sky*'s crowdsourced creative film-making contributions, beginning in 2008 range from simple provision of video and music under CC BY-NC-SA license[3] to encouraging mass engagement (Tryon, 2013, p. 149), through to developing 3D models and generating special effects (Jenkins, Ford, & Green, 2013, p. 251). Yet as the director Timo Vuorensola proposed at the 2011 5th Futures of Entertainment (FOE5) conference, this model is one of 'benevolent dictatorship' in which crowd ideas and enthusiasm are invaluable, but a final arbiter is required.[4] In their call for contributions, 'tasks include casting, background research, visual design, marketing, music and movie-related events',[5] these activities are similar, albeit in an extremely inclusive manner, to the fan engagement now requested as commonplace audience interaction over the life of feature films. Thus, if looking for measures of success for OCF projects, the toolset of the FLOSS literature can be of particular help where it recognises open-oriented practices and mainstream models as a continuum and not as a dualist/opposed relationship.

3. Framework and methodology

3.1. The biography of open film-making and open film-makers in the film industry

We developed our analysis by applying the BoAP perspective (Hyysalo, 2010; Johnson et al., 2014; Pollock & Williams, 2008).

BoAP was articulated by scholars concerned about the about the shortcomings of prevalent research designs based on localised ethnographic studies of particular moments and contexts in understanding technological developments that emerged and evolved over multiple settings and extended periods. To overcome this, BoAP proposed research strategies for extending the analytical purview, including the longitudinal extension of the research and triangulating between multiple ethnographic studies perhaps from diverse innovation moments or institutional viewpoints. BoAP scholars emphasised the need for reflection on how the researcher's point(s) of access shaped what might be found.

We adopted BoAP as an extension of the social learning perspective (Sørensen, 1996) as a means to understand the evolution of a technology project (in this case OCF) and how it changed over time with greater experience and as wider arrays of actors became involved. Building on a previous study of the early Open Film Movement, this study adopts a wider viewpoint that allows us to analyse OCF as part of the development of the film-making industry as a whole (including tensions between mainstream industry and OCF).

Looking at openness in film from such an extended perspective avoids imposing an interpretive lens shaped by the dualism between proprietary versus non-proprietary licencing. It also motivates attention to broader patterns of innovation driven by various players including consumers, as well as the creation and adoption of new models for professional work. For example, Braun's study of online television distribution and the role of technological 'work-arounds' in the life of start-ups 'Hulu and Boxee', provides a rich account of the agency of consumers in rendering distribution malleable (Braun, 2013). This historical view of Boxee's open source component evidences how participatory design

both embodied user values and engendered conflict with traditional media industries.[6] Thus the interaction between actors typically kept apart by rigid value chain-oriented interpretations can be uncovered. Vonderau's consideration of Warner Bros.' 'Connected Viewing' scenario argues that such a framework 'formalizes hitherto informal market exchanges, for instance by channelling word-of-mouth via platforms such as Twitter or Facebook' (Vonderau, 2013, p. 112). Rather than categorising Swedish web video consumption, so often characterised through The Pirate Bay as 'the other' to Hollywood economics, Vonderau considers a spectrum of formality. Consumers continually negotiate complex networks of market components, including both traditional industry elements such as paywalled content libraries and internet grey areas such as VPN provision. All these influences shape the environment in which OCFs operate, how their practice is envisaged, developed, and assembled. These elements of digital technology associated with openness and the agency of consumers, can be seen as simply being appropriated into mainstream distribution practices. However, the idiosyncratic, project-based nature of film-making motivates our attention to greater detail across the full complexities of the film life-cycle.

3.2. Fieldwork

Data derive from the authors' long-term engagement with the OCF community developed also as part of the UKRC Centre for Copyright and New Business Models in the Creative Economy. In the first phase of our engagement (2010–2013), described in our initial study [Author submitted paper Revolution Postponed]), informants were sampled among those using CC licenses and data was collected mainly through semi-structured interviews. In a subsequent phase (2012–2015), the research group became involved in events that created a dialogue between film-makers using CC licenses, independent film-makers and representatives of the mainstream industry.[7] In this second phase, discussed here, further data were collected through participant observation and interview techniques to add to the existing body of knowledge. The data derive from 48 hours of participant observation between June and October 2014, including transcription from more than six hours of interview material. We sampled informants based on age, role in the film industry, adherence with open formats and geographical provenance to get a diverse sample to compare and contrast with accounts gathered in the first phase of our investigation. By extending our sampling strategy, we became aware that we were dealing with a wider constellation of open practices including *inter-alia* crowdfunding and self-produced filming tools (e.g., open video cameras).[8] Considered as a whole and in its interplay with mainstream industry, this constellation of practices can be classified within a continuum from open, innovative to closed, mainstream practice in the creative industry.

A further stream of data, concerning the ways in which OCF elements become interwoven with mainstream film-making, and how this itself is changing, is drawn from the understanding of one co-author as a practical theorist (Hoffman, 2004). Drawing on seven years of experience as a researcher and consultant embedded in the film industry, the co-author contributes rich participant-observation data and insights into the field. His cumulative prior knowledge of specialised publications, policy developments, market operation, and multiple research projects focussed on the application of digital marketing and distribution tools to the independent film industry, was invaluable in helping us

interpret information from the primary stream of data collection. Risks that this co-author might be seen to be biased towards particular outcomes or models are minimised by the fact that he has moved to an academic position and is not engaged with any OCF practices or practitioners, with any research participants of the study, or with commercial actors who might be committed to, or conversely potentially threatened by the OCF approach.

4. Data analysis

Here we report findings from participant observation and semi-structured interviews with OCF informants from five different European countries (Belgium, Germany, Poland, Spain, and Norway). Findings are presented with a focus on accounts that highlight the ability of OCFs to switch seamlessly across non-proprietary, peer production, and formal practices. Fictional names are used to maintain the anonymity of respondents.

Our analysis addresses the interplay of the mainstream industry with OCF. In sub-Sections 4.1 and 4.2, we examine OCF practices as part of the development of the film-making industry as a whole, from the OCF perspective. In section 4.3, we adopt the perspective of the mainstream industry to portray how OCF practices have influenced its practice. The qualitative data addressing a range of specific developments and issues in film-making such as social media marketing, crowd contribution as a genre, and the adoption of crowdfunding, were analysed thematically (Aronson, 1995; Boyatzis, 1998) to develop conceptual propositions to account for the role of OCF. Themes were allowed to emerge from the data, as opposed to following a list of categories or characteristics set *a priori*. Our previous experience in the industry informed an understanding of the Film Value Chain and helped us contextualise its interaction with OCF practices (Fitzgerald & Dopson, 2009; Stake, 2005). Areas of tension and of convergence were examined; the motivations of the OCF adopting agencies were considered, be they strategic selection, or understandable as exploratory, opportunistic responses. The methodological approach aims to capitalise on the 'unavoidable and obligatory' imperative to get 'close or inside' the field of media industries (Vonderau, 2014, p. 69), whilst putting the BoAP lens to work to question assumptions, for example, of control through ownership, and challenge orthodox readings from within media industries.

4.1. The interplay of mainstream industry with OCF from OCF perspective

While originating in what was conceived by proponents as a parallel economy, our informants make sense of openness by exploring it in interaction with mainstream practices. Mark, a Belgian film-maker, tells how, depending on his client, he manages to license the same content using creative commons licenses or normal copyright. His critical perspective spanning licensing formats and associated communities allows him to develop an informed, instrumental approach.

> Mark: I have sold one project to the Dutch television and I have sold another one to a Belgian television and the thing is: they pay a licence fee because I use the non-commercial so they need to pay a licence fee but they won't pay to me directly. They pay to a collecting society. There was no way to do it directly. It's very complex to do it that way. So what I do is that I separate rights. My film will be creative commons online and just normal copyright for television […]. So the work around for

> me was to do separated rights. I am with collecting societies for the television rights and everything else is CC and I do it myself.

When we ask how Open Content Film-makers (OCFs) take licensing decisions, accounts are divided. Those who came to OCF from their ideological commitment and concern to protect the value of self-expression never appear to have tried regular commercial formats. On the contrary, players rooted in independent film-making, whose business seems to be switching seamlessly across different licensing formats, were making complex strategic decisions, informed by a broader perception of the horizon of opportunities in the film industry. For some the choice of OCF was contingent. This was the case for Zena, who decided to licence her movie using CC simply because it was first screened at a CC festival.

> Zena: [I assigned a CC license to my movie] because I submitted it here [BCC festival], they accepted it, then I decided. No … sorry … I already knew I wanted to license my movie but I did not know what type of license … Then they selected the movie here and there has been a moment in which I had to decide which license to be able to present it here, because this is a CC festival. I could not tell: 'leave it, I will decide in one year … '. So I decided to choose this license.

Informants who were ideologically committed to OCF did not always manage to fully articulate the wide horizon of opportunities that a mixed model can offer. This asymmetry of awareness limited the ability of actors to articulate the full spectrum of opportunities and develop robust strategies. These limitations were particularly apparent in early entrants, who complain about the lack of training received at University on these matters. A recently graduate, Rose, tells us she did not have any idea about licensing until she participated in a festival:

> Rose: Honestly we did not have any kind of information about licensing in the University. We had nothing about intellectual property apart from the very obsolete things like 'the law says that piracy is not good'. But there is nothing about creative commons. Mostly I had to learn everything online, visiting websites, also talking to people like Peter [one of the CC festival organisers] who are in the creative commons network.

Both Rose and Zena did not even consider licensing in other formats. When asked: 'when you had to address licensing, … did you consider alternatives [to Creative Commons]?' their answer was a resounding no. This might prove to be another obstacle for the development of the careers of OCF proponents.

In contrast, the accounts from independent film-makers who in their productions can switch seamlessly across practices with different degrees of openness had a very different tone. They display a more acute sense of strategy, which point to the benefits that may be derived by a more balanced perception of the horizon of opportunities. Stephan and Mary are the creative directors and funders of a media agency developing digital content for activists and advocates worldwide. They talk about the Creative Commons license as a 'brand' that helps increase the reach of their production and gain credits to attract further funding.

> Mary: […] you can imagine we have this small amount of money that pays for a small reach and then what we can do for content that has Creative Commons license is that we can get a much bigger reach than the money we have … is more duplicating, an amplifier of what we are already doing, a magnifier that goes much further than

> we could possibly do by ourselves with any kind of money. […] As an example, we made this film. It is about 6 years ago now, and we had only a sound budget for it. We made it in English and then it was translated by volunteers in 22 languages […] volunteers organised 250 screenings, in 62 different countries.

4.2. The case of crowdfunding from the OCF perspective

One compelling illustration of the cross-fertilisation of practices across the mainstream/open boundary is that of crowdfunding. Our data show how OCF informants understand the benefits of open practices not in isolation but in relation to mainstream practices. As exemplified in the following excerpt crowdfunding can be perceived as an open platform for securing funding, with the added value of protecting the independence of film-makers.

> Mary: I think we might try [crowdfunding, ed.] with one of our products which is [name of video production] … as far as I am aware is the only substantial resource on independent digital security advice. I think this is why it has so many users, but I think it possibly is a good leverage for funding as well because everything else out there is commercial. And so we think that maybe trying out [crowdfunding] with our users would be interesting … and we have a good excuse that is: 'we do not want to take money from government, we do not want to take money from software companies, we want to give a totally neutral agenda for your resource … if you want to keep this neutral, if you want to keep this clean you should donate … […]'

In this excerpt, we see an example of how the benefits of crowdsourcing are understood by our informants in comparison with mainstream forms of funding (e.g., government funding). It helps maintain a neutral agenda, which is an important value for OCFs such as documentary makers or activist media agencies (as in the case of Mary). However, from a perspective that extends beyond ideological affiliation, Mary's account of crowdfunding also contemplates limitations of combining mainstream and OCF tools and practices.[9] One is that, given the less restrictive conditions, CC licensed material is often not credited. This makes it hard for organisations that rely on government sources to secure grant funding.

> Mary: The biggest problems I see with CC is that people do not adhere to the rules, people do not actually quote you often. They kind of take the stuff and then don't publicly credit you. And people say to you informally 'how we took your stuff and made it in Chinese … '. But they will not credit you properly. This is where we came back on the business model. This is why it is a problem, because if you said I rely on grant funding and you can't give to funders evidence of your distribution then you have to go around tracking and trying to figure backward reversing like 'is that our stuff in Chinese or it is not our stuff in Chinese'. So, when your business model is proving reach and evaluating 'we are getting everywhere', CC can be a problem …

In the following section, we provide another example of how our informants systematically understand OCF properties as inter-linked with mainstream tools. Committed OCFs expressed concern that CC and the logic of crowdfunding were being *co-opted* by (that is turned in favour of) mainstream industry. Although emerging within the open ethos as a way for a group of people with similar ideas to create something together, new forms of self-funding could be used as a justification to cut public expenditure for art and culture.

Mark: I am not so fond of the all crowd-funding thing neither I know if it works in some cases … Making audio-visual production is a very expensive thing … It's very difficult to crowdfund 100k euro. Yet it's not a lot of money to create a project. So imagine you can crowdfund 100k for one project. Then I have to do it again for the other one and again. And I would be the poor guy with the hat, you know … I think it's a beautiful idea for certain projects that otherwise would not exist. But I am not very fond of it because especially in Belgium there is the ideology of 'it's crisis so we have to cut public funding because you know people can f … crowdfund it'. And that's why as an activist and film-maker, it's a label but as any other label I try to be aware of my surroundings and I am against it, not against it but against the co-optation of a concept that is basically 'our group of people with the same interest wants to create something' it has now been co-opted by a certain part of government that sees a beautiful opportunity to cut back in public spending for culture.

Other informants articulated very different views of how OCF resources might affect the mainstream industry. Nieve, a Norwegian film-maker, spent the majority of her career in mainstream production. Recently she started producing her work using OCF resources. Her view is that, as an increasing number of successful projects find crowdfunding to be a viable financing option, pressure is put on making public expenditure on art and culture more accountable, especially when directed toward media conglomerates and large publishing houses. Greater accountability over public spending can thus be advantageous for independent film-makers. No matter their sometimes contrasting orientation, these accounts show that far from reproducing a dichotomous rendition of mainstream versus OCF, our informants articulate an extended horizon of opportunities.

4.3. The interplay of mainstream industry with OCF from the mainstream industry perspective

In this section, we extend our empirical account that transcends the dichotomy between open and commercial models by including the mainstream industry perspective. We do this by referring to professional practice, cumulative reading of specialised industry publications and in-depth knowledge of government policy documents gained by one of the co-authors from working for multiple film organisations and related companies.[10] Reliance on the contribution of a practical theorist is key to uncover elements of OCF activity interwoven with commercial film business operations, partly because much use of non-proprietary tools is hidden in the oft-overlooked technical aspects of post-production,[11] and partly because some of these elements are not officially credited in mainstream industry as deriving from OCF.

We begin with cases where OCF influence is less recognised, such as the diffusion of crowd marketing via social media and the gradual reduction of restrictive distribution practices. We then progress to consider crowd contribution as a *genre*, and crowdfunding and open content documentaries as legitimating the role of OCF in the mainstream industry.

Crowd contributions to film-making (in the broadest sense) is one of the primary areas where OCF components might be identified as influencing the mainstream industry. In its most pervasive form, though not recognised by the mainstream film industry as part of

OCF, crowd contributions can be detected in the diffusion of crowd marketing via social media (Baym, 2013). The profound uncertainty regarding audience responses and thus whether sufficient revenue will be generated to recoup production costs/motivate investment, is a common problem for mainstream production as well as for OCF (De Vany, 2004; Franklin & Kelly, 2009). Digital tools have provided film-makers with new means to attempt to address these conditions of uncertainty. In general, such digital strategies focus on a reduction in the spatial and temporal distance between the (intended) audience and the film, motivated by the notion that earlier, deeper, more regular and more direct interaction will result in greater engagement and sales. That this engagement can be quantified is seen as offering a means to make that uncertainty more manageable. The broader diffusion of the notion of a regular and deeper interaction supported by the free circulation of cultural content brought forward by OCF projects is also affecting mainstream film distribution practices. In particular, the gradual reduction of restrictive or 'closed' distribution practices, such as enforced periods of darkness between the end of a film's theatrical availability and the beginning of home entertainment windows can be seen to be reflected in the emergence of open alternative distribution tools such as BitTorrent.

A second element, more high profile and explicitly understood as open, is found in processes of crowd sourcing creative input, for example, the period of open submission policy of Amazon Studios project.[12] However, the fact that also in these cases the resulting production remains a traditional closed-shop practice (mainly from established producers) shows how open elements regularly combine within ideologically incompatible elements from a mainstream industry framework. As also evidenced by other initiatives seeking crowd contribution such as *Iron Sky*, the potential of cultural peer production is tempered by the need for hierarchy and centralisation in the delivery of a feature film (Cassarino & Aldo, 2007; Hjorth, 2014). While considered at the margin of mainstream film-making, OCF has contributed to the mainstream industry with the development of genres such as 'remix cinema' and crowd-oriented initiatives, as in the case of the movie *Life in a Day,* produced by Ridley Scott and directed by Oscar-winning director Kevin Macdonald by assembling crowdsourced YouTube videos. We might look to the longevity of genre communities and vibrancy of digital fandoms (Jenkins et al., 2013), and the increased role of public funding for community engagement projects as further evidences for this phenomenon.

However, it is in the area of film funding that the increasingly distributed agency enabled by digital tools such as crowdfunding platforms has had most notable impact on mainstream industry. Unlike TV commissioning, where broadcasters are the funders and the buyers, traditionally films are financed without a probabilistic assessment of final consumer demand. Crowdfunding has changed this for a proportion of some films' budgets. By raising a portion of finance from directly interested consumers, productions access valuable funds, and potentially secure increased market awareness. Moreover, by avoiding other more costly commercial finance in completing a film's budget, a greater proportion of revenues can be made available to the film-maker, with the potential for increased sustainability, should a hit arise.

Further evidence of the influence of OCF is a more relaxed view on non-purchased viewership of content. Independent film-makers in mainstream film industry frequently conflate straightforward illegal piracy and the consumption of more freely distributed content (as exemplified by Paley's open model of distribution for her movie *Sita Sings the*

Blues) within a view that any attention, even piracy, is valuable validation in the extremely competitive environment in which developing audience responses and reputation are key.

Social media marketing, crowd contribution as a *genre* and the adoption of crowdfunding are examples that, even amongst the mainstream industry, it is not an either-or model of digital and open, versus traditional and closed. Rather, a spectrum of options is continually being considered by film-makers as they seek to negotiate an industry in a continued state of flux. Just as openness in open film-making cannot be reduced to open licensing, the closed character of the mainstream industry cannot be understood simply as uniform adherence to restrictive copyright.

Documentaries are a further locus for the adoption of interactive, networked and participatory film-making forms typical of OCF.[13] Success in the delivery of documentaries, especially those concerned with social issues, is more readily evaluated and widely understood in mainstream production through measures of artistic, social, and cultural impact. For example, the mission statement for the open documentary lab, Docubase,[14] announces: 'We believe that documentaries play a vital role in our democracy and culture and that today's technologies and techniques offer creative possibilities for expression: the promise of new voices, and the reach to new publics'.[15] Through gaining artistic legitimacy, open documentaries have contributed to creating a growing understanding of OCF practices within the mainstream industry. The legitimisation of open practices through their use in documentaries is likely to make open film-making and open licensing more sustainable. Educational licenses, for example, allowed films such as *Particle Fever*[16] and *Stem Cell Revolutions*[17] to be widely viewed and their impact measured in downloads. Other kinds of open film-making distribution tools find their way through a bespoke mix of elements from the mainstream industry. For example, as described in the report reviewing the crowd distribution of *I Am Breathing* (Reiss, 2014), the producers, in collaboration with a Video-On-Demand (VOD) company, created a video player that enabled community members to self-book and host screenings, as well as buy the DVD/VOD, pay for others to see the film for free (pay it forward), and donate to the related charity (an average top-up donation was made of £5 per sale). A total of 310 screenings were booked via the player, and occurred in 50 countries around the world. Half the screenings took place on a specially promoted global awareness day, using Digital Rights Management-free downloadable copies of the film.[18] The success of the release was predicated on early, ongoing and multi-faceted audience engagement using content dissemination, social media, email marketing, campaigning software, and offline events.

5. Discussion and conclusion

Informed by a methodological template derived from the BoAP perspective, integrating insights from studies conducted at different times and from differing research locales/viewpoints, and through the contribution of one co-author as practical theorist in interpreting the stream of primary data, we explored OCF developments from the viewpoints both of OCFs and from the mainstream independent film industry perspective. In so doing, the interplay of OCF with mainstream industry practices became apparent as a key development. We noticed a number of tensions between mainstream and new (open) practices. Our BoAP lens suggests that an assessment of the contribution of OCF needs to consider its insertion within the wider industry.

Applying perspectives arising from studies of FLOSS to examine OCF has helpfully pointed to similarities in terms of the need for managerial supervision and goal-oriented organisation in the peer production of film and other cultural goods. However, typical measures of FLOSS project success are not as readily applicable. Tracking key metrics in the same manner for OCF as for FLOSS projects thus proved unhelpful. The number of contributors to a film project is not a guide to film quality (Ghiassi et al., 2015). These and similar factors do not capture the scope of reasons for OCF adoption or the variety in the kind of OCF practices evidenced by the empirical data of this study.

Our analysis allows a number of theoretical contributions: (i) it corrects the paradoxical misreading of the significance of OCF yielded by short-term studies that emphasise the (limited, partial) uptake of open practices; (ii) it charts how the initial vision of OCF developed and evolved; (iii) it frames the relationship between OCF and mainstream models as a continuum, and (iv) it makes clear how OCF practices are beginning to be domesticated by the mainstream industry at different levels of production and distribution.

The extended nature of our enquiry, informed by BoAP, allows us to take on board the struggles by players to make sense of OCF offerings and determine their relevance in practice through social learning (Sørensen, 1996). Our initial focus had been to search for evidence of the establishment of sustainable value creation strategies for open film analogous to FLOSS. Guided by BoAP, we reflected upon our early findings (analysed in [Author submitted paper, Revolution Postponed]) and considered how they were shaped by our initial point of insertion of our research. This suggested a radical redefinition of our enquiry to examine the extent and the manner in which, OCF elements are taken up within the film sector, and to assess how and to what degree they constitute part of emerging models for production/distribution in the mainstream film industry in the digital age.

In this subsequent paper, after the initial vision of open content film – coupling open licensing and a powerful imaginary of its use – failed to materialise, we chart how the affordances of different ways of using decentralised, non-proprietary forms of peer production were identified and tested in practice, and how in this way OCF became domesticated (in the sense articulated by Lie and Sørensen [1996] of taming/bringing in from the wild) and woven into mainstream industry practices, and how these developments may contribute to the further evolution of industrial models/practices in a rapidly changing context. The FLOSS community (and many FLOSS researchers) often seek to counterpose the proprietary commercial world of self-interests with the open world of FLOSS and associated IP technologies such as CC. In practice, our research flags the complex interplay between proprietary, centralised commercial world practices and decentralised, non-proprietary forms of peer production. By bringing different media industry segments into conversation these papers bridge the problematic gap between accounts that portray issues as either unique to particular media or conversely overgeneralise from particular observations. Our BoAP-informed methodology, pursuing robust understanding by extending ethnographic enquiry in duration and scope, also seeks to avoid the risk of presuming homogeneity that may result from large-scale research methods (Perren, 2013).

How OCF came to form part of the armoury available to players in a continually digitally disrupted Film Value Chain was, at the time of our analysis, the outcome of sustained experimentation to address practical questions, arising in some instances as a result of exigency (as captured by instrumental and contingent approaches to OCF) and in others from a more conscious strategic selection. These usages often breach the dichotomy

drawn by CC enthusiasts between open and commercial models. Instead, we found various hybrid models of use in which practitioners recognise OCF is not meaningful in certain situations, such as in dealing with conventional commercial models of TV distribution, but may be useful in enhancing existing practices of developing a reputation through the maximised dissemination of creative work as a 'calling card'. OCF can be an important element, allowing the release of interim products, to build crowdfunding via social media, and thereby leveraging longer-term investment by building fanbases. In relation to documentary makers exploring participatory, networked forms of cultural production, this activity takes on more nuanced elements due to the changing relationship between producer and consumer.

Viewing OCF from a FLOSS-centric perspective offers a rather uni-dimensional account of the development of the film industry, that does not grasp the particular dynamics of the content distribution value chain and the product cascade that includes TV, internet, and other media. Taking conventional content production and distribution process as a starting point and envisaging how this might be changed by CC, the open content literature did not engage with the complex ways in which the film industry has been changing in the digital economy. This includes the temporal reorganisation of the previously sequential relationship between financing, production, and distribution as well as changes in the product cascading that is at the core of the film industry. The impacts of digital disruption on the film industry, including piracy and increased competition amongst entertainment providers, have significantly reduced revenues, for example, from DVD sales, and consequently also the finance available for investment and acquisitions. Responses from film-makers have privileged digital marketing and distribution technologies to engage audiences earlier, more deeply and more directly, often circumventing traditional market incumbents such as distribution companies. Such strategies rely on utilising digital tools to capitalise on the moments of maximum attention generated for a film project. This attention is often partly built via social media over an extended period. Thus the historical flow of content from theatrical to DVD, to rental, and pay TV can be compressed, even negated by a single 'day-and-date' release (Paris, 2015).

It is in the increased interrelation in financing, production, marketing, and distribution, facilitated by direct digital engagement of audiences (consumers/users) across these previously distinctly segmented fields, in which the uptake of OCF tools has become most widespread and sustainable. OCF research focusing on the use of open licenses examining collaborative creation, funding, and free distribution practices tends to focus upon interesting differences and commonalities with FLOSS findings, but does not capture the spectrum of different activities that constitute these broader kinds of openness and their role in career paths or judgements about value. For instance, one analysis of open licences in film-making from an innovation perspective states: 'In open source movie projects many contributors, whether investors or creative, go without monetary compensation. Indeed, the licenses disconnect the production from the diffusion process, as in the free/open source software projects' (Gambardella, 2013, p. 182). However, if we do not restrict our purview to projects formally designated as Open, but take a wider view encompassing developments in the mainstream film industry perspective, we see the integration of production and diffusion as absolutely crucial to the overarching pursuit of creating value, requiring actors to manage the tension between control and openness. Attempts to address these extremely challenging goals sometimes involve open source software, free, or non-

restrictive distribution mechanisms aimed at spreading content and awareness in the hope and expectation of financial returns. However, these tools are part of a suite of approaches used across different projects and career stages, which interact with traditional commercial elements in complex and extended networks (Entwistle & Slater, 2014). We might helpfully consider this innovative creative work as a kind of entrepreneurial bricolage, a combining of resources at hand to address problems and opportunities in creative industries (De Klerk, 2015).

From the perspective of practitioners within (and researchers of) the mainstream film industry, OCF's role in early stage careers, or in piloting of new material, is often viewed through the same lens as other 'calling-card' initiatives such as short films and micro-budget features. From the industry point of view, no revenues are expected from such endeavours, and film-makers see the value of their action as a vehicle for future revenue creation.[19] The transferable nature of digital fanbases (and their potential contribution to financing, marketing, and distribution) accompanying the film-maker from smaller, more open projects to larger more traditionally produced works provides great motivation for integrating OCF within the broader scope of media industries' organisation.

Following up our initial (2010–2013) study, at a later stage (2012–2015), and from a different viewpoint (of the mainstream film industry rather than the OCF movement) has yielded a very different understanding of the extent of uptake and implications of CC – as a valued addition to the techniques of the mainstream industry seeking to manage tensions between openness and control over their content – beyond conceptions of OCF as an alternate sphere. However, the processes we describe are still unfolding. In a context of rapid and profound ongoing change,[20] further reworking of the Film Value Chain may be anticipated. Further research is needed to capture these developments and how, for example, they may differ between different Film Value Chain segments (Perren, 2013; Vonderau, 2014) in order to capture the evolving industry ecosystem. The research published across these two papers has sought to explicate the value of multi-site and multi-temporal ethnography as a research strategy for engaging with the complex evolution of the cultural industries in a context of rapid and far-reaching changes in technology, business, and service models, and strategies for managing intellectual property.

Notes

1. https://www.indiegogo.com/projects/iron-sky-the-coming-race--2#/ posted 5 Nov 2014, last sampled 20 March 2018.
2. https://www.invesdor.com/finland/en/pitches/545 posted 2015, last sampled 20 March 2018.
3. http://creativecommons.org/weblog/entry/8315 posted 23 May 2008, last sampled 20 March 2018.
4. http://opendoclab.mit.edu/futures-of-entertainment-5-mit posted 18 Nov 2011, last sampled 20 March 2018.
5. http://www.ironsky.net/press-releases/pick-your-favourite-villain-iron-sky-universe-introduces-a-new-development-platform-as-crowdsourcing-begins/
6. Braun (2013).
7. These primarily include contributing to the organization of the Barcelona Creative Commons Film Festival in collaboration with the Universitat Oberta de Catalunya (UOC) as well as establishing a 'Digital Creative Industries cohort' of researcher and practitioners including former Edinburgh University Alumnus Will Page, director of Economics at Spotify, Turin-based entrepreneur Irene Cassarino and Ciclica.cc, organisers of the Bicycle Film Festival.

8. As in the case of the Barcelona based collective Kinoraw, https://en.goteo.org/project/kinoraw.
9. Our evidence resonates with Sørensen (2012, 2015) who explores the unintended consequences of crowd-funding for the wider documentary film industry. However, our analysis primarily focuses on its consequences for production and distribution and less on the content of documentaries. A study addressing implications of crowd-funding on the topics of documentaries can be found in Koçer (2015). We thank one of the reviewers for pointing us to these additional studies of crowd-funding.
10. These include Creative Scotland, EU MEDIA, Distrify, Film London, NESTA, Scottish Screen, Skillset, Sigma Films, UK Film Council, and the Wales Creative IP Fund.
11. For example, in visual effects and animation software like Alembic, see http://variety.com/2011/digital/news/ilm-sony-imageworks-release-alembic-1-0-1118041083/ posted 9 Aug 2011, last sampled 20 March 2018.
12. http://variety.com/2013/biz/news/step-aside-netflix-amazons-entering-the-original-series-race-1200749146/ posted 22 Oct 2013, last sampled 20 March 2018. http://variety.com/2013/digital/news/amazons-latest-bid-to-digitize-hollywood-a-free-screenwriters-virtual-corkboard-1200972562/ posted 18 Dec 2013, last sampled 20 March 2018.
13. http://momentsofinnovation.mit.edu/interactive/, last sampled 20 March 2018.
14. http://opendoclab.mit.edu/storytools-lets-build-tool-writing-non-linear-stories-david-dufresne posted 4 Feb 2015, last sampled 20 March 2018.
15. http://docubase.mit.edu/about/, last sampled 20 March 2018.
16. http://www.rocoeducational.com/particle_fever, last sampled 20 March 2018.
17. http://www.stemcellrevolutions.com/, last sampled 20 March 2018.
18. http://blog.scottishdocinstitute.com/drm_a_return_to_edison_and_the_mppc posted 11 Dec 2013, last sampled 20 March 2018.
19. http://blog.scottishdocinstitute.com/the_virtuous_circle posted 6 Feb 2006, last sampled 20 March 2018.
20. These developments include the rapid dominance of Streaming Video on Demand services like Netflix and the growing role of the social media and internet giants (captured with the acronym FANG Facebook, Amazon, Netflix, and Google) in which OCF and FLOSS elements have arguably played an important role in technological facilitation of new modes of distribution (and as a result, production and finance). See, for example, https://medium.com/netflix-techblog/tagged/open-source last sampled 20 March 2018.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Arts and Humanities Research Council [RCUK Centre for Copyright and New Business Models in the Creative Economy: CREATe].

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