

Public open collaborative creation (POCC): A new archetype of authorship?

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Public open collaborative creation (POCC) model constitutes an important method of creating intellectual content within the sphere of digital humanities. POCC is defined as creation that takes place through the contributions of a multiplicity of persons (contributors) under a model of sequential innovation, resulting in the production of a literary, artistic, or scientific work which remains in a continuous state of change and development over an undefined period of time. This article examines the POCC model in relation to three creation projects that employ(ed) it for the production of literary and artistic content. It argues that the use of the POCC model has given rise to a new form of collaborative authorship that is inclusive and dynamic and as such cannot be adequately captured within the traditional notion of collaborative authorship currently recognized by copyright law. It concludes by outlining the need to revisit the existing notion of collaborative authorship in copyright law in order to enable it to accommodate the notion of POCC authorship.

1 | INTRODUCTION

The collaborative creation model enjoys a position of significance within mankind's cultural creation narrative. It is embedded within our folkloric tradition of storytelling and is also visible in experimental and populist artistic movements.¹ In a general sense, collaborative creation refers to a creation process within which a plurality of persons engage in the production of intellectual or informational content by sharing and combining their creative and informational resources, skills, and knowledge (Camarinha-Matos & Afsarmanesh, 2006, p. 3).

Within the existing copyright law framework with its individualistic focus and tendency to conceptualize the author as a romantic solitary genius (Woodmansee & Jaszi, 1994, pp. 2–3),² the collaborative creation model has been relegated to a position of secondary importance. Nevertheless, the advent of the Internet and advancements in digital technology have led to a re-assertion of collaborative creation as a dominant model in the production of cultural content. In recent years, there has been an upsurge of creation projects that profit from the possibilities for remote collaboration and networking afforded by this new technological infrastructure. Crowd-sourcing³, remixing and mash-ups are examples of such new forms of collaborative creation. However, the question arises whether copyright law, as the default legal regime that regulates legal entitlements over intellectual expression, is able to adequately provide for these innovative forms of collaborative creation.

For a considerable period of time, the notion of authorship in copyright law has been subject to scrutiny on the grounds that it fails to adequately recognize and provide for new forms of authorship that have emerged within the digital humanities (Cooper, 2004, pp. 175–176).⁴ In this article, I focus on the inability of copyright law's notion of collaborative authorship to address a new form of collaborative creation that is gaining wide acceptance on digital media which I refer to as “public open collaborative creation” (POCC). At present, the best known examples of the POCC model are *Wikipedia*⁵ and free open-source software (FOSS) creation projects such as *VLC*⁶ and *Debian*⁷. I argue that the POCC model gives rise to a new form of collaborative authorship that is inclusive and dynamic and as such, cannot be adequately captured or expressed within the traditional notion of collaborative authorship recognized by copyright law.

In part 2 of the article, I define the POCC model and describe it in relation to three creation projects that employ(ed) it for the production of literary and artistic content. In part 3, I construct a notion of POCC authorship and in part 4, I examine the extent to which the existing notion of collaborative authorship in copyright law is able to capture and accommodate the notion of POCC authorship. In part 5, I attempt to identify the main points of divergence between these two notions of authorship. The objective of this article is to present POCC authorship as a new archetype of authorship that cannot be adequately captured within the existing notion of collaborative authorship in copyright law. It also engages in a brief exploration as to the possibility of revising the existing exclusivity based conceptual framework of copyright law in order to enable it to accommodate this new archetype of authorship.

2 | THE POCC MODEL

I define POCC as creation taking place through the contributions of a multiplicity of persons (contributors) under a model of sequential innovation and resulting in the production of a literary, artistic or scientific work which remains in a continuous state of change and development over an undefined period of time. As per the structure of this model, a plurality of authors engage in the creation of a common work by modifying and building upon expression contributed by each other along a process of sequential innovation that takes place within an open-ended timespan.

The term “work” is used in the context of copyright law to denote that the POCC process usually culminates in the production of intellectual content that would qualify for copyright protection.⁸ The openness of the model, which will be elaborated in more detail below, signifies that the creation process is open to participation by members of the public, as opposed to being limited to members of a closed group of persons.

It is noted that, the POCC model closely corresponds to von Hippel's model of “open collaborative innovation” (OCI) that has been defined as development projects in which multiple users collaborate and contribute for free and openly share what they develop.⁹ However, the fact that this concept has been formulated with reference to innovation economics, and the vague terms in which it has defined, makes it unsuitable as a concept on which a legal analysis could be founded. On the other hand, my definition of the POCC model is designed to deal specifically with the production of creative content that will come within the framework of copyright law as opposed to innovations taking place in the spheres of patent law or the law of industrial design. Therefore, it is possible to describe POCC as a genus of the broader notion of OCI.

The following descriptions of three creation projects that employ(ed) the POCC model in the creation of literary and artistic content serves to better illustrate its practical workings within the sphere of digital humanities.

a. Wikipedia

Commonly referred to as the free-encyclopedia, *Wikipedia* is a free-content, free-access encyclopedia that is supported by the *Wikimedia Foundation*. The Foundation provides a publicly accessible Internet platform and an array of software tools that enable individuals from across the world to collaborate in the creation of encyclopedia articles under a POCC model. The articles which qualify for copyright protection as literary works are made available to the public under a *Creative Commons-Attribution-ShareAlike* (CC-BY-SA) 3.0 unported license.

Participation in the creation process is open to any member of the public who agrees to abide by the terms and conditions of the CC-BY-SA license as well as certain normative guidelines that apply to the platform. Contributors to the POCC work are loosely organized into a creator community that can be categorized as an epistemic community, the members of which are brought together by a social consciousness to belong to a group, but nevertheless retain their individuality within the community (Clément-Fontaine, 2017, pp. 237–238). The normative guidelines that apply to the platform (which are adopted by the community through consensus), are administered and enforced by a group of “administrators” who are themselves contributors in good standing, elected by their peers. The ability of contributors to directly participate in the governance of the platform and the consensus-based governance framework, enables the development of a sense of community and a community identity as *Wikipedians*. However, neither the community nor the administrators have the ability to exercise creative control over the expression incorporated in an article and each contributor retains a substantial degree of creative autonomy in determining the nature, form and timing of his own contribution. While *Wikipedia* editors have the ability to remove content that is deemed inappropriate, such acts of removal must be carried out according to platform guidelines as opposed to the individual discretion of the editor.

As each contribution made to the *Wikipedia* platform is subject to a CC-BY-SA license, any person has the ability to participate in the development of an encyclopedia article by adding to, modifying, adapting and even overwriting or deleting content created by previous contributors. Apart from this, they can also engage in editorial functions, which although not directly resulting in the creation of intellectual expression nevertheless, play an important role in shaping the form of a *Wikipedia* article. Discussion forums enable contributors to discuss and deliberate on aspects of the creation process. However, it appears that these are mainly used for discussions relating to technical matters, as opposed to issues that directly relate to the content or expression of an article.

b. This Exquisite Forest¹⁰

This Exquisite Forest is a collaborative graphic art project conceived by artists Chris Milk and Aaron Koblin and produced by the Tate Modern in London and the Google Data Arts team. It used the POCC model to create graphic animations exploring specific themes that built upon each other, along a chain of sequential innovation. Members of the public were able to participate in the creation process over an Internet platform as well as by using digital drawing tablets that were made available to visitors at the Tate Modern.

The object of the project was to use graphic art as a medium for interactive storytelling and for the creation of fluid visual narratives. Several artists from the Tate created initial (“seed”) animations based on specific themes. Members of the public were also allowed to create their own seed animations. The initial artists provided instructions as to how these themes could be explored and developed. Succeeding contributors were invited to interpret and build upon those seed animations according to the instructions set down by the initial artist, although compliance with these instructions was not considered mandatory. Contributors were allowed to branch-off each other’s contributions, similar to the way in which collaborators branch-off computer code developed by others in the creation of FOSS programs.

While contributors enjoyed a high degree of creative autonomy and freedom in developing upon the existing content, their contributions were curated by the producers of the project for appropriateness and quality. The

producers reserved the right to refuse to incorporate certain contributions into the common work and to remove certain contributions from the platform.¹¹ However, this does not mean that the producers exercised a discretionary power to control and to determine the creative evolution of the common work. They merely reviewed contributions in order to ensure that the creation process was not undermined through the incorporation of contributions that clearly failed to fulfill expected quality and appropriateness standards.

Unlike in the case of *Wikipedia*, the platform hosting *This Exquisite Forest* project did not offer discussion forums that could be used by contributors to interact outside of the creation process. Furthermore, platform governance was administered by the project's producers and contributors were not provided with the opportunity to get involved in governance activities. Both these factors could have contributed to the absence of a sense of community on the part of contributors.

Although the producers closed the platform to new contributions in 2014, content created during the course of the project is made available to the public under a *Creative Commons Attribution-NonCommercial-ShareAlike* (CC-BY-NC-SA) 3.0 *unported* license. This means that it is possible for members of the public to continue to use and develop this content and thereby to continue the POCC process outside of the platform.

c. Folding Story¹²

The *Folding Story* project uses the POCC model to allow members of the public to collaborate in the creation of fictional stories over an Internet platform. Each contributor writes a line or a paragraph of a story that is added to by other contributors in order to create a short story or fictional narrative. Unlike in *Wikipedia*, contributors are not able to overwrite or change a contribution made by a previous contributor. They are only permitted to add to and build upon previous contributions in order to continue the initial narrative. However, a substantial amount of creative autonomy is allowed in determining how the narrative is developed and it is possible to introduce significant changes to the theme, plot and characters. Use of and access to the content made available through the platform is made conditional upon the acceptance of and compliance with Terms of use and access, that have been drafted by the owners of the platform.¹³ Thus, consent to the Terms is implied through the fact of use and access. It is unclear whether these Terms could have the force of contract. It is more likely that they constitute a bare license to use and develop existing content in making one's own contribution.

The sense of community among contributors is weaker in comparison with *Wikipedia*. This could once again be ascribed to the absence of a general discussion forum within which contributors are able to interact with each other outside of the creation process and the centralized governance framework that is administered by the platform owners. Thus, interaction between contributors to *Folding Story* is limited to the act of creation itself (i.e., contributing expressive content to an existing fictional narrative or initiating a new narrative).

Based on the above descriptions as to how the POCC model is being employed for the creation of intellectual content, I identify four main characteristics of the model that are of relevance in constructing a notion of POCC authorship, these characteristics are discussed below.

2.1 | Openness

Openness is a term that is widely used both in law as well as in the field of innovation economics and has been defined in various ways.¹⁴ However, openness in the context of the POCC model refers to the minimization of restrictions attached to participation¹⁵ in the creation process and to the use of the intellectual content that is produced through that creation process.¹⁶

Firstly, the POCC process is "open" to any member of the public who fulfills minimal formalities (e.g., free registration is required on the *Folding Story* platform) or agrees to abide by the generally applicable terms and conditions of participation. Thus, the borders of the creator community are porous and there are minimal barriers to entry. Secondly, a POCC work constitutes an "open-resource" that can be accessed, used, adapted and modified by

any person both within and outside the platform. In the case of *Wikipedia* and *This Exquisite Forest*, the openness of the resource is given legal effect through the application of a CC license. In the case of many FOSS programs this function would be carried out by the General Public License (GPL). In other instances, it could be carried out by requiring those who hold copyright over their individual contributions to grant a “bare license” to potential contributors and users that permits the use and re-use of those contributions within the POCC process. This openness is facilitated by the non-rival and non-excludable nature of a POCC work that enables it to be shared and enjoyed among an infinite number of persons at the same time.

2.2 | Chain of sequential innovation

The POCC process involves a multiplicity of persons building upon and adding to contributions made by each other within a sequential innovation process. This means that each contribution to the POCC process holds the potential to inspire and to direct the nature of succeeding contributions. It also means that the POCC work is in a constant process of change as a result of contributions that are being made to it over an indefinite period of time.

A distinctive feature of the POCC model is the absence of a specific pre-determined creation goal or scheme of creation. For example, although contributors to a *Wikipedia* article share a common consensus that their contributions should lead to the creation of an encyclopedia article on a particular topic, they do not engage in the creation process within a pre-agreed creation design as to how the article should be structured, the sequence in which the facts should be presented, or the nature and content of each contribution. The fact that collaborators tend to be distanced both spatially as well as temporally along the sequential innovation process makes it even more difficult for them to share such a common design.

Furthermore, unlike in traditional models of collaborative authorship, there is very little interaction between contributors outside of the creation process. As noted above, although contributors to *Wikipedia* may interact over discussion forums, these discussions tend to focus around technical issues. Very rarely do they relate to the creative decision making process or to the formulation of the actual “expression” of an article. On the other hand, in *This Exquisite Forest* and *Folding Story* projects there is no possibility for such discussion, therefore interaction among contributors takes place indirectly through the act of creation itself.¹⁷

2.3 | Creative freedom and autonomy

The POCC process is also characterized by an absence of organizational hierarchy that is usually present in traditional collaborative endeavors such as the creation of films, operas or compilations where one or more co-authors exercise creative control over the work either by directing the creative activity of others and or by exercising discretionary power in determining which contributions should be included in the final work. The POCC model is heterarchical,¹⁸ meaning that each contributor enjoys an equal degree of power and authority in determining the direction and outcome of the creative endeavor (Bruns, 2006, p. 279). This gives to contributors the freedom to exercise a high degree of creative autonomy within the creation process. Accordingly, each contributor has the ability to develop or change the narrative of the work in a way that could not have been predicted by preceding authors. Furthermore, contributions to a POCC work tend to be random and sporadic and to proceed according to the personal preferences and discretion of each contributor. This results in a significant variance between contributions in terms of both quantity and quality. For example, one person may contribute an entire paragraph consisting of his original expression while another's contribution could be limited to a small editorial modification.

2.4 | Ideology

The POCC model of creation is influenced and supported by a particular creation ideology based on equality, collectiveness, and sharing. This ideology is usually shared by contributors to POCC projects and serve to incentivize their participation in the creation process. Unlike conventional models of collaborative authorship

recognized under copyright law, POCC authorship is not driven by considerations of direct or indirect pecuniary reward (Volker & Hanekop, 2011, p. 12). Instead, participation is incentivized *inter alia* by the possibility of gaining peer-recognition, being a part of a community and engaging in a socially valuable creation activity. Peer-recognition in particular can be a powerful factor that motivates contributors to continue to engage in the creation process or to enhance their degree of participation (Glott, Schmidt, & Gosh, 2010, p. 9).¹⁹ For example, within the *Wikipedia* project, a high level of peer-recognition could be rewarded through election to administrative positions as well as greater appreciation and respect for the contributor within the community. In *Folding Story* contributors who show a high level of commitment to the creation project are honored through blog posts and announcements made by the platform owner as well as a scoring system that ranks their activity within the platform. Thus, recognition of authorship and the ability to preserve one's identity within the creation project attains considerable significance within the POCC framework.

3 | CONSTRUCTING A NOTION OF POCC AUTHORSHIP

As per the characteristics of the POCC model discussed above, I proceed to construct a notion of POCC authorship in relation to the elements of inclusivity and dynamism, which I argue constitute the core elements of the notion of POCC authorship.

3.1 | Inclusivity

Inclusivity denotes the shared and collective nature of POCC authorship. In this sense, it can be viewed as a counterpoint to the exclusivity based copyright law notion of authorship with its strong individualistic bias²⁰ and accompanying view of an author as a solitary genius.²¹ The element of inclusivity emerges in relation to several aspects of POCC authorship.

Firstly, it is apparent in its acknowledgement of authorship as a collective exercise within which the individual ideas and experiences of a plurality of persons entwine and react with each other in order to give rise to creative expression. The element of inclusivity also emerges through its recognition that authorship is not only about the creation of new or original content but also includes a strong component of adapting, refining and re-interpreting existing content within an incremental process of creation.

Secondly, the architecture of the POCC model affirms that, the value of a POCC work will increase corresponding to the number of contributors that are engaged in the creation process and the diversity of their knowledge, skills, and experience. Thus, POCC authorship is founded on the assumption that, the greater number of contributors who could be channeled to the creation process and the more diverse their intellectual backgrounds and experience, the greater the utility and value of the intellectual output (POCC work) which will ensue through the creation process. In this sense, POCC authorship reflects a collaborative value creation exercise within which each individual creator dedicates his contribution to a common creative endeavor in the expectation that the value of his individual contribution would be enhanced through its combination with other contributions and the modifications and improvements effected by downstream contributors.

Thirdly, POCC authorship is inclusive in its refusal to discriminate among different types of contributions or the different roles played by various contributors within the creation process. For example, a person who contributes a paragraph of original copyrightable expression to a *Wikipedia* article obtains a similar claim to the authorship of that work as a person who corrects a grammatical error or refines the syntax of a sentence of that paragraph. It is likely that the degree of peer-recognition that would accrue to these two persons within the creator community would vary. However, as per the ideology of the POCC model, both would be considered as having had contributed to the authorship of the POCC work in equal measure. Thus, each contribution is afforded equal value within the POCC authorship process notwithstanding the fact that individual contributions tend to vary both quantitatively as well as qualitatively.

3.2 | Dynamism

The element of dynamism in POCC authorship arises primarily through the use of the sequential innovation model, the absence of a creation hierarchy and the creative autonomy enjoyed by contributors to the POCC process. This creative autonomy allows any contributor to transform the direction or perspective of a POCC work according to his own individual discretion and in a way that could not have been foreseen or predicted by preceding contributors. This is especially true in the case of projects that focus on the production of creative and artistic content such as *This Exquisite Forest* and *Folding Story*. Although in certain cases, project initiators or platform owners may be able to screen contributions for appropriateness and quality, their role is usually limited to guarding against acts of vandalism and the prevention of contributions that violate community norms and guidelines from being absorbed into the POCC work. It does not enable any person to exercise control over the creative or artistic decisions made by the contributors or to determine the form and nature of the POCC work.

On the other hand, each contribution made to a POCC work holds the potential to direct and inspire succeeding contributions and to determine the trajectory of the creation process. This also serves to imbibe POCC authorship with an inherent dynamism. As such, it becomes impossible to discount the importance of any contribution no matter how small, as even something as commonplace as a suggestion or idea could serve as a source of inspiration for future contributors. This is accentuated by the random and sporadic nature of contributions that enable contributors to instantly and spontaneously react to the creative contributions made by each other as well as to developments taking place in the world around them.

The open-endedness of the POCC model and the absence of a pre-determined creative goal or objective, allows wide scope for experimentation, iteration, creative exchange and cross-fertilization within the authorship process. Thus POCC authorship acts as a creative incubator within which different creative visions could be expressed, developed, or rejected. This also highlights another aspect of the dynamic quality of the notion of POCC authorship, in that, authorship is linked to both a product (i.e., the POCC work) as well as a creation process. Thus, as opposed to the notion of authorship in copyright law that is defined in relation to a static work, POCC authorship needs to be defined both in relation to the POCC work as well as the POCC process.

Having attempted to construct a notion of POCC authorship, I proceed to consider the extent to which POCC authorship could be accommodated within the existing notion of collaborative authorship in copyright law. In doing so, I refer to the ways in which collaborative authorship has been conceptualized and applied in the copyright law frameworks of France, the US, and the UK.

4 | COLLABORATIVE AUTHORSHIP IN COPYRIGHT LAW

Buccafusco (2016, p. 1230) correctly points out that, copyright jurisprudence was not initially founded upon a theory of authorship, neither has it worked one out. Nevertheless, it is possible to draw a notion of collaborative authorship in copyright law from the way in which authorship has been conceptualized and interpreted in relation to works created through collaborative creation endeavors.

Copyright law recognizes three models of creation that give rise to works of plural authorship, namely the joint, derivative, and collective models of creation. This classification applies consistently across different copyright law systems, albeit with nuances in the ways in which they are defined and interpreted. Authorship and the distribution of exclusive rights over works of plural authorship are determined according to the model of creation within which the particular work of plural authorship has been produced. What is interesting is that copyright law's conception of plural authorship appears to be limited to these three specific models. At the moment, copyright law does not offer a catch-all-category (or a category *droit commun*) that would be equipped to deal with a work that fails to fall within any one of these categories. As such, there is no indication as to how a work that is created through the efforts of a multiplicity of persons through a process that does not fit within any of these three models would be treated under copyright law.

At the outset it must be noted that, a POCC work would not fit within any one of the categories of collaborative creation currently recognized under copyright law. The joint creation model envisions a group of persons collaborating together in the creation of a specific and as yet unfinished work,²² with the creation process automatically coming to an end once the joint work has been realized. Thus the joint creation model fails to capture the open-ended nature of the POCC process which is not directed toward the production of a specific work but can continue indefinitely.

Similarly, a POCC work cannot be categorized as a derivative work. The derivative creation model envisions the creation of a new work through the modification, alteration, or adaptation of a pre-existing work. Thus, the new work "derives from" an existing work and constitutes a work of multiple authorship in the sense that it represents a fusion of expression belonging to the author of the pre-existing work and the author of the derivative work. However, the derivative work constitutes an independent work that exists separately from the pre-existing work and vice versa. Thus, the derivative creation model fails to capture the dynamism that is inherent in the POCC model whereby, any contribution that modifies, adapts, or builds upon an existing contribution is absorbed into the common work without enjoying a separate existence from it.

The collective creation model envisages the creation of a collective work through the compilation or arrangement of the creative contributions made by a multiplicity of authors, within a logical sequence. The characteristic feature of the collective creation model is that the different authors do not collaborate with each other within a common creative endeavor but instead work independently on their individual contributions. These contributions are later collated together to form a single collective work by a person who is usually attributed the authorship of the collective work (provided that the compilation and/or arrangement of the different contributions display sufficient originality in order to qualify him as an author). As such, the absence of collaboration among the different authors within the creation process and the fact that these different contributions usually remain separate and distinct from each other, clearly prevents the POCC process from being located within the collective creation model.

However, in the absence of a general notion of collaborative authorship in copyright law, I am compelled to construct a notion of collaborative authorship by reference to the way in which authorship has been conceptualized in relation to these three creation models. Of these, the collective creation model gives rise to a work of single authorship as opposed to a work of collaborative authorship as the collective work is attributed to the sole authorship of the person responsible for arranging or compiling the creative contributions made by the other authors. Thus, the collective creation model is not useful to an inquiry into the notion of collaborative authorship in copyright law. Therefore, I proceed to consider the way in which authorship has been conceptualized and interpreted in relation to the joint and derivative creation models.

I argue that, the notion of collaborative authorship in copyright law hinges upon three main elements. Firstly, the existence of a static (in the sense of unchanging) work to which authorship is attributed. Secondly, the contribution of original expression (the criterion of originality being determined according to the standard applicable to each jurisdiction). Thirdly, the degree of control exercised by the author over the creation process which refers to the author's ability to control the artistic or creative judgments that are reflected in the original expression incorporated in the work.

4.1 | Static work

The notion of collaborative authorship in copyright is constructed in relation to a static work, the nature and form of which remains constant. Any modifications or additions to this static work will result in a new derivative work (provided that the modification or addition satisfies the requisite threshold of originality), but the work itself will remain unchanged. Linking the notion of authorship to a static work emphasizes authorship as a relationship that exists in relation to a product and fails to take into account its relationship to a creation process.

Interestingly, in a determination delivered by the Court of Appeal of Versailles, France, in the case of *Thomas et SARL Ready Soft v. SARL Codat Informatique et Mattern*²³ a distinction was drawn between a new "version" of a work

and a “new” work. The Court of Appeal held that, the technical and functional developments effected in the successive versions of a software program did not result in the creation of a new software program but merely represented a stage in the technical and functional evolution of that software program at a given time.²⁴ The Court of Appeal acknowledged that software programs, such as the one under review, would necessarily constitute an evolutionary product by reason of the practical need to adapt to rapid technological developments and that this evolutionary process would continue so long as the software program was in the process of commercialization.²⁵ This decision therefore, represents an acknowledgement on the part of the Court of Appeal of Versailles as to the evolutionary nature of software programs and a refusal to artificially compartmentalize each stage of their evolution as a new derivative work. The Court of Appeal concluded that, rather than constituting a series of independent derivative works, the different successive versions constituted a collective work within which the personal contributions of various authors are merged together without it being possible to attribute to them a separate right over the final work.²⁶

In this instance, the software program was created under a proprietary model which made it easier to categorize it as a collective work which had been created subject to the authority of the corporate entity under whose name it had been divulged. However, in the context of a POCC work, the categorization of different stages of a work's evolution as a collective work is not possible. This is especially true in the case of French law²⁷ where which such categorization requires the existence of an authoritative entity (*maître d'oeuvre*) who takes the initiative for creation (Vivant & Bruguière, 2013, pp. 328–329), which is clearly not present in the case of a POCC work.

4.2 | Original expression

“Originality of expression” is the cornerstone of copyright law. Copyright law provides protection to authors in respect of their original expression by means of granting exclusive rights that enable them to control the ways in which such original expression is used and exploited. Thus, an author is defined as the person who creates the original expression that qualifies for copyright protection (Versteeg, 1996, pp. 1326–1327). As Woodmansee (1984) observes, “[i]n contemporary usage an author is an individual who is solely responsible—and therefore exclusively deserving of credit for the production of a unique work” (p. 426). This reflects the conceptualization of authorship as an individual relationship that subsists between a person and the expression created by him. The notion of originality serves to establish this individual relationship. This conceptualization of authorship also pervades the notion of collaborative authorship in copyright law. The following discussion exemplifies how the criterion of original expression is applied in relation to joint and derivative works.

4.2.1 | Joint works

Authorship requires that the creative contribution is directed toward the expression of the work. This effectively precludes persons who contribute information or ideas and make purely technical contributions such as refining and correcting existing content, from claiming authorship over the joint work. French law necessitates that a co-author demonstrates that his contribution qualifies as an original creative contribution. The criterion of creativity requires that his contribution is directed toward the expression (*mise en forme*) of the work. Similarly, US law enunciates that an author is a person who actually creates a work by translating an idea into a fixed, tangible expression that is entitled to copyright protection.²⁸ Thus, persons who merely contribute non-expressive elements in the form of research assistance or commentary are precluded from qualifying as joint-authors.²⁹ The law of the UK takes the same position by requiring a putative joint author to contribute the “right kind of skill and labor”³⁰ in the sense of contributing to all or any of the constituent parts of a work by way of authorship.³¹

The problem with limiting authorship only to those persons who have contributed toward the expression of the work is that, it effectively discriminates against those contributors who engage in vital tasks of editing and commentary which, although not directly contributing to the expression of a POCC work, are nevertheless crucial in

sustaining the creation process and could serve to influence the nature and form of the common work. Such discrimination militates against the ideology of equality and democracy on which the POCC model is founded and could serve as a disincentive for contributors from continuing to carry out these tasks.

Furthermore, UK copyright law also notes that the contribution must be made toward the authorship of the work in the sense that it must find itself expressed in the final work (Garnett, Davies, & Harbottle, 2011, p. 248). This gives rise to uncertainty as regards the authorship status of a person who has contributed original expression to a POCC work which has subsequently been obliterated within the course of the sequential innovation process. This could take place by reason of a succeeding contributor intentionally deleting or overwriting the expression³² or by reason of the expression becoming obliterated as a result of incremental modifications made along the sequential innovation process.³³ In either case, under the existing copyright law framework of the UK, the authorship status of such a contributor would be precarious.

As regards the requirement of originality, US law requires that, in order to qualify as a co-author of a joint work, "the contribution must represent original expression that could stand on its own as the subject-matter of copyright" (Goldstein, 1989, p. 379). In the decision delivered in the case of *Childress v. Taylor*³⁴ the Second Circuit affirmed this view and noted that co-authorship required the making of a contribution that could be independently copyrightable. The copyright laws of France and the UK do not include such an explicit rule. However, in view of the criterion of originality being used to establish an individual link between an author and the expression created by him,³⁵ it is possible to argue that the copyright laws of these jurisdictions would not allow a contributor to make a claim of authorship in relation to an original expression, the originality of which cannot be attributed to him.

The main difficulty in applying the criterion of originality to POCC works is that within the "tweaking" process that is commonly used (especially in the creation of *Wikipedia* articles), an amalgamation of expressions contributed by different persons within the sequential innovation process which on their own would fail to satisfy the standard of originality may, through their combination with each other, give rise to an original copyrightable contribution. In such an instance, it would be difficult to determine who should be vested with authorship over that contribution. It is also possible that none of these contributors would qualify as authors under the existing originality test, notwithstanding the fact that an original work has come into being.

4.2.2 | Derivative work

The author of a derivative work is the person who creates a new work by modifying the original expression belonging to an existing copyright protected work and combining it with his own original expression. Thus two requirements need to be fulfilled in order to qualify as an author of a derivative work.

Firstly, the contributor must contribute his own original expression to the new derivative work. Desbois (1978) explains that under French copyright law, such originality must manifest itself through the new expression that is contributed to the derivative work by its author, or through its composition; meaning in the way in which the author structures or arranges the pre-existing work (p. 33). It is clear that mere acts of tweaking will not be able to fulfill the requisite standard of originality nor would simple edits. In the UK it has been held that, in order to secure copyright protection it is necessary that the labor, skill and capital expended by the author of the derivative work, "should be sufficient to impart to the product some quality or character which the raw material did not possess and which differentiates the product from that raw material."³⁶ Therefore, it appears to be necessary that the author imbibes the original expression belonging to the pre-existing work with some material alteration or embellishment which suffices to make the totality of the new work, an original work.³⁷ Similarly, in the US, it is necessary that the derivative work demonstrates a sufficient level of originality in the sense that it incorporates a distinguishable and non-trivial variation from the pre-existing work (Ginsburg & Gorman, 2012, pp. 42–43).

Secondly, it is necessary that the new derivative work incorporates original copyrightable elements belonging to the underlying work. French law holds that such incorporation could either take the form of a "material incorporation" (i.e., that the protectable element is incorporated as it is and without modification in the composite work) or an

“intellectual incorporation” (i.e., that the protectable element is incorporated with modification as in the case of adaptations or translations where it is the spirit of the intellectual element that is incorporated in the derivative work and not the element *per se*) (Pollaud-Dulian, 2014, pp. 402–403). Similarly, in the UK, it is required that the derivative work appropriates a substantial part of the original expressive content belonging to a pre-existing work (Garnett et al., 2011, pp. 7–30). US law has a somewhat higher threshold by requiring not only that the derivative work should incorporate original expression that belongs to a pre-existing work, but that this expression should also be transformed, recast or adapted (Patry, 2006, pp. §3–141).

As noted above in the discussion relating to joint works, not all contributions that build upon existing content would be able to demonstrate an original independent contribution on their part so as to qualify as authors of a derivative work. Furthermore, not all new contributions would incorporate copyrightable content belonging to a pre-existing contribution as required under the copyright laws of France and the UK. It would be even more difficult to find contributions that transform or adapt expressive content belonging to pre-existing contributions as required under US copyright law.

4.3 | Control

The element of control refers to the notion that in collaborative creation endeavors, authorship will accrue to those persons who exercise control over the creative decision making process in determining the nature and form of the original expression that is incorporated in the final work. Although not as clear-cut as the other two elements discussed above, the element of control can be discerned in the notion of collaborative authorship in all three jurisdictions.

In the context of a derivative work, control is not only exercised by the author of the derivative work who makes creative decisions with regard to the new expression that is contributed by him as well as the way in which protectable elements of the pre-existing work is incorporated within his new derivative work; it is also exercised to a certain degree by the author of the pre-existing work who is able to impose limitations and restrictions as to the way in which portions of his work can be used and modified within the derivative work. Thus, the author of the pre-existing work is able to exercise some “negative” degree of control over the creation process by preventing the author of the derivative work from using his work in certain specific ways.

As regards the joint creation model, under French law, in order to categorize a collaborative work as a joint work it is necessary that all collaborators work together under a “common inspiration” (also defined as a “spiritual intimacy”) which enables them to work toward a common goal by means of a “creative concerted effort” (Lucas, Lucas, & Lucas-Schloetter, 2012, p. 119). Although an exact universally accepted definition of this term is yet to be discovered, Desbois (1978) explains this to mean that the distinct efforts have been applied toward a common goal and that the various contributions have been realized in contemplation of others, in the sense that each contribution is made following a mutual exchange of ideas among the different co-authors (p. 165). The requirement of common inspiration evokes a mutual rapport among authors as to the nature and form of the final work that would be achieved as a result of their creative collaboration. Thus, each contributor to the joint work would engage in the creative activity with an understanding and *consensus* as to the common work that will arise through their joint efforts. The existence of a “common inspiration” means that the task of creative decision making is shared among all the authors which in turn presumes that, they all enjoy a degree of control over the final nature and form of the work. Thus, in the *Le Prince Igor* case³⁸ the Court of Appeal of Paris, refused to treat two students of the composer Borodine as his co-authors in an opera that had been left unfinished at the time of Borodine's death on the basis that, it was not possible to attribute to Borodine a spiritual intimacy with his students in finishing the work. Such a “common inspiration” is clearly absent in the case of an POCC work, where any downstream contributor is able to modify or change the narrative of the POCC work in a way that does not accord with the creative vision of upstream authors.³⁹

Similarly, the law of the UK requires that in creating a joint work, the co-authors collaborate to produce a copyright work of a single kind in prosecution of a common design (Cornish, 1999, p. 386). This seems to indicate the

existence of a pre-agreed scheme of creation on the part of all contributors that allows them to collaborate in the achievement of a shared goal or objective (Bently & Sherman, 2014, p. 131). In the case of *Robin Ray v Classic FM*⁴⁰ it was determined that, in order to establish authorship it was essential for the contributor to have direct responsibility for what appeared on the page and that a joint author must participate in the writing and share responsibility for the form of expression in the literary work. Furthermore, in the case of *Hadley v Kemp*⁴¹ a musical composition was considered to be a work of sole authorship as opposed to being a work of joint authorship because, although a plurality of persons contributed to the creation of the musical work, the strict control exercised by one member of the band over the creation process and in determining the nature and form of the final musical work, made it a work of sole authorship. On the other hand, in the case of *Stuart v Barrett*⁴² a musical composition that was produced through a “jamming” session by members of a band, with each member playing a significant and creative role in bringing the music of a song to its final form, was considered to be a joint work that was the product of the compositional skills of all members of the group. The difference in the determinations reached in these two situations can be explained both in terms of the original contributions made by the band members in the latter case, as well as the fact that all those persons shared a degree of control over the creation process.

In US copyright law, the link between control and authorship has been affirmed in a series of decisions delivered by the Ninth Circuit that adopts a control-based test of authorship whereby, authorship is determined based on the creative and financial control exercised over a joint work (Dolin, 2011, p. 548).⁴³ For example, in the *Aalmuhammed v Lee*⁴⁴ case, the Ninth Circuit rejected a claim of joint authorship made by Aalmuhammed who claimed to have reviewed and revised a film script and to have even written entire scenes that had been enacted in the film. The Ninth Circuit based their decision to reject the claim of joint authorship on the grounds that, Aalmuhammed did not at any time have superintendence of the work and that he was not the person who actually formed the picture by putting people in position and arranging the place. These aspects were controlled by the director of the film and the production company. Furthermore, the Ninth Circuit observed that, although Aalmuhammed was able to make helpful recommendations to the director, the director was not bound to accept any of them. The Court reasoned that the work would not benefit in the slightest unless the director chose to accept those recommendations. Accordingly, the Ninth Circuit concluded that Aalmuhammed lacked control over the work and that, “absence of control is strong evidence of the absence of co-authorship.”⁴⁵

This element of control is lacking in the notion of POCC authorship as no person has the ability to exercise control over the creative process or in determining the nature and form of the original expression that is incorporated in the POCC work. The open-ended nature of the sequential innovation process and the creative autonomy exercised by each contributor makes such control impossible as well as irrelevant to the notion of POCC authorship.

5 | REVISITING COPYRIGHT LAW TO ACCOMMODATE THE NOTION OF POCC AUTHORSHIP

I argue that the divergence of the notion of POCC authorship from the existing notion of collaborative authorship in copyright law can be traced to a fundamental difference in the ideological bases on which these two notions of authorship are founded; POCC authorship being based on a notion of inclusivity while copyright law is based on a notion of exclusivity.

Within the framework of the INCLUSIVE project, the “term” inclusivity has been defined as the quality of a legal entitlement to a resource, held by a plurality of persons, characterized by the collective and symmetrical enjoyment of the utilities of the resource and an absence of power on the part of any person to exclude another from benefitting from those utilities (Dusollier, 2016, p. 4). I build upon this definition to describe inclusivity in authorship as an entitlement to claim authorship over a work that is held by a plurality of persons in a collective and symmetrical way without any one of those persons having the power to exclude another from claiming such authorship.

Copyright law is primarily a tool for the propertization of intellectual content in order to allow it to circulate in the marketplace as a commodity (Aufderheide, 2013, p. 22). As Aufderheide (2013, p. 22) notes, authorship has an extraordinary convenience for this purpose insofar as it affixes the origin of the work and provides an original property holder. Biron and Cooper (2016, p. 68) concur with this view by observing that the purpose of authorship for copyright law is, amongst other things, to determine the first instance ownership of property rights.

Ensuring the efficient propertization of a copyright protected work necessitates that the transaction costs associated with the use and re-use of such a work is maintained at a minimum. This requires firstly, that the copyright is vested in an identifiable person or persons so as to minimize the search costs of potential users in identifying and communicating with rightholders in the license clearance process and secondly, that the fragmentation of the copyright is avoided as far as possible in order to prevent the costs of use and re-use from increasing. In this regard, the elements of original expression and control act as useful mechanisms in limiting the number of authors who could claim copyright over a collaborative work by ensuring that only those who satisfy these criteria will be granted exclusive ownership rights.

The limitation of the individuals who could claim authorship over a collaborative work may be justified and even necessary, where the authorship claim leads to the ownership of exclusive rights over the work. However, I argue that, in light of the ideological shift from inclusivity to exclusivity that is discernible within the POCC context, the application of artificial criteria in order to limit authorship is redundant. This is for the reason that, within an inclusive process of authorship, any person who is willing to abide by the terms and conditions of use subject to which the POCC work is made available to the public (e.g., the terms of the CC or GPL license) are able to use and enjoy it without the need to obtain an individual license from the authors. On the other hand, the limitation of authorship solely to persons who have contributed original expression to the POCC work could be damaging to the sustainability of the POCC model as it militates against the basic ideological norms of equality, collectiveness and sharing which fuel the POCC process.

Accordingly, I argue that, the exclusivity-based notion of authorship in copyright law should be revisited and expanded in order to accommodate the POCC notion of authorship that is based on inclusivity and dynamism. As a means of achieving this, I propose that the notion of "work" in copyright law should be expanded to include dynamic evolutionary works such as POCC works. This would allow authorship to be understood in a broader sense; not merely as an individual relationship that subsists between the author and the original expression contributed by him to a specific work, but as a relationship held by an author to the totality of an evolving work which is the outcome of a POCC process. Thus, any person whose contribution has been directed toward the creation of the POCC work and has been absorbed into the POCC work, should be recognized as an author of that work, regardless as to the nature of that contribution, its originality and whether it remains visible (in the sense of not being obliterated) in the POCC work at a particular stage of its evolution.

The requirement that the contribution should be absorbed into the POCC work denotes that it is integrated into the POCC work in some way, in the sense that it has not been rejected at the outset by an editor or curator who has either been authorized by the creator community to do so or has been acknowledged by the creator community as holding such authority. In other words, it simply means that the contribution should have been accepted as a *bona fide* contribution made toward the creation of the POCC work, whether it be an addition or modification to a *Wikipedia* article, a contribution made toward the debugging of a FOSS program or an idea for the development of the plot of a fictional narrative on the *Folding Story* platform. On the other hand, by requiring that the contribution be directed toward the actual creation of the POCC work persons who carry out functions that are "neighboring" to the creation process, such as the provision of the digital space (platform) on which the creation process takes place and the provision of digital tools used in the creation of content will be precluded from making a claim of authorship.

As Jaszi (1991) observes, authorship is a culturally, socially, politically or economically constructed category rather than a real or natural one (p. 459). As such, social shifts and transformations in the way creation is carried out and creativity is viewed necessarily lead to changes in the way the notion of authorship is constructed. This is not to say that the conventional notion of collaborative authorship in copyright law is no longer relevant. Nonetheless, it is

necessary to acknowledge that recent shifts in creative and cultural practices indicate that exclusivity and proprietization is no longer the sole accepted canon in the production of cultural content. It is increasingly being challenged by the new creed of inclusivity and sharing. Therefore, if it is to maintain its relevance as a legal doctrine that is *in sync* with current creative practice, copyright law needs to be able to cater to both sides of the ideological divide.

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ENDNOTES

- ¹ For example, experimental art movements such as Dadaism, Neo-Dadaism, and more populist movements such as the appropriation art movement, pop-art movement extensively use the collaborative creation model. Freiling (2014, May 1). Appropriation/Collaboration. Retrieved from <http://arts.umich.edu/news-features/appropriation-collaboration> (accessed 28 April 2018).
- ² Woodmansee and Jaszi are the proponents of the theory that, the traditional notion of authorship in copyright law is based on the romantic conception of the author as a solitary genius who creates intellectual content flowing from his own personal inspiration and devoid of external influence as further elaborated in Jaszi (1991) and Woodmansee (1984). See also Rose (1993) who observes that, "Copyright is founded upon the concept of the unique individual who creates something original and is entitled to reap the profit from those labors" (p. 2).
- ³ For example, the collaborative graphic art project entitled "Sheep Market" launched by Aaron Koblin. See www.aaronkoblin.com/work/thesheepmarket (accessed 2 February 2018).
- ⁴ See also Reuveni (2007, pp. 258–289).
- ⁵ Wikipedia is a web-based, free-content encyclopedia that is supported by the Wikimedia Foundation. See <https://en.wikipedia.org/wiki/Wikipedia> (accessed 2 February 2018).
- ⁶ VLC is a free and open source cross-platform multimedia player. See <http://www.videolan.org/vlc/> (accessed 2 February 2018).
- ⁷ Debian is a free and open source operating system that is based on the Linux kernel and the FreeBSD kernel. See <https://www.debian.org/intro/about.en.html#what> (accessed 2 February 2018).
- ⁸ A "work" or a "work of authorship," is the object of copyright protection. It may be defined in different ways in different legal systems. However, all systems agree that a "work" constitutes expression that satisfies the criterion of originality required under that particular copyright law system. As Madison (2017) observes, "[j]ust as the author is copyright's person, the work is copyright's thing" (p. 3).
- ⁹ von Hippel, E (n.d.). Definition of open collaborative innovation. In *Financial Times*. Retrieved from <http://lexicon.ft.com/Term?term=open-collaborative-innovation> (accessed 2 February 2018). See also Baldwin and von Hippel (2011), p. 1403.
- ¹⁰ The project was operative from July, 2012 to August, 2014. See www.exquisiteforest.com/concept (accessed 2 February 2018) for further information on the concept of the project and the POCC model employed by it.
- ¹¹ See term and conditions of submitting contributions to the project at <http://www.exquisiteforest.com/terms> (accessed 2 February 2018).

- ¹² See <http://foldingstory.com> (accessed 2 February, 2018).
- ¹³ As per the terms of access and use of the Folding Story platform, available at <http://foldingstory.com/terms/> (accessed 2 February 2018).
- ¹⁴ See Chesborough (2003) for a description of the concept of “open innovation” and Benkler (2017) who discusses “open access” in the context of informational commons.
- ¹⁵ As noted by Fuster Morell (2014), “[o]penness to participation is made operative through the provision of channels that allow intervention in content creation, as well as through the protocols that guide those channels. Protocols refer, for example, to low requirements for credentials to participate” (p. 291).
- ¹⁶ The “openness” of the use of the intellectual content and the autonomy enjoyed by each user is also encapsulated in Benkler’s (2016) definition of “openness” (in the context of peer-production) in terms of the, “freedom to operate without having to translate one’s ideas or initiatives into someone else’s decision over purse strings or authority structures” (p. 104). It can also be described in terms of Madison, Frischmann and Strandberg’s (2010) definition of “openness” as the capacity to relate to a resource by accessing and using it and the absence of barriers to use. (p. 695).
- ¹⁷ On indirect interaction through the act of creation see Clément-Fontaine (2014), p. 175.
- ¹⁸ Crumley (1995) defines a heterarchy as “(. . .) the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of ways” (p. 3).
- ¹⁹ See also Forte and Bruckman (2005, p. 4) for a discussion as to how peer-recognition (credit) can manifest itself as credibility within the community.
- ²⁰ As observed by Craig (2011, p. 11), within the theoretical framework of copyright law authorial activity is viewed as an individual act rather than a communicative act.
- ²¹ For an exploration of the genesis of the conception of the author as a solitary genius in literary theory and copyright law see Woodmansee (1984). See also Jaszi (1991) for a critical analysis of copyright law’s construct of the author as a romantic solitary genius.
- ²² In the decision delivered by the United States Court of Appeals (9th Circuit), in the case of *Ashton-Tate Corp. v. Ross* [1990] 916 F. 2d 516, 522, it was affirmed that where a contribution is made to a pre-existing work it would not result in a joint work but in a derivative work. Similarly, Bently and Sherman (2014, p. 131) observe that poem written by one person and translated by another will not constitute a joint work but a derivative work.
- ²³ CA Versailles 4 octobre 2001, *Thomas et SARL Ready Soft c. SARL Codat Informatique et Mattern*, 327 RJDA 3/2002, 276.
- ²⁴ *ibid* at p. 278.
- ²⁵ *ibid*.
- ²⁶ *ibid* at p. 279.
- ²⁷ A collective work (*oeuvre collective*) is defined in Article L 113–2 of the Intellectual Property Code of France as a, “work created at the initiative of a natural or legal person who edits it, publishes it and discloses it under his direction and name and in which the personal contributions of the various authors who participated in its production are merged in the overall work for which they were conceived, without it being possible to attribute to each author a separate right in the work as created.” (Emphasis added).
- ²⁸ See decision delivered by the United States Supreme Court in the case of *Community for Creative Non-Violence v Reid* [1989] 490 US 730, paragraph 11.
- ²⁹ See p. 803 of the decision delivered by the United States Court of Appeal (7th Circuit) in the case of *Seshadri v Kasraian* [1997] 130 F.3d 798 where it was determined that the assistance provided by a research assistant, secretary or draftsman in the preparation of scholarly paper does not entitle the persons providing such assistance to claim the status of joint author.
- ³⁰ See paragraph 25 of the decision delivered in the case of *Fylde Microsystems Ltd v Key Radio Systems Ltd*. [1998] FSR 449, where the High Court of Justice held that in inquiring into a claim of joint authorship in a computer programme it was necessary to determine whether the putative joint author has contributed the right kind of skill and labour that could amount to authorship or joint authorship of the programme.
- ³¹ See paragraph 79 of the decision delivered in the case of *Cyprotex Discovery Ltd. v University of Sheffield* [2004] RPC 4, where the Court of Appeal held that, the contribution made by the University of Sheffield in the creation of a computer programme did not qualify it to be recognized as a joint author of that programme since its contribution was limited to the provision of background information and test data, checking the first phase of the programme *etc.* and that a claim to joint authorship of a computer program could established only where the participant had written or contributed to a significant extent in writing the programme (or any of its constituent parts) by way of authorship.

- ³² Such overwriting is allowed within certain creation projects that use the POCC models such as *Wikipedia*, though not all.
- ³³ I do not consider contributions that are rejected at the outset by the community or by the curators of the project for being inappropriate and/or damaging to the quality of the POCC work, since these contributions are not considered to be absorbed into the POCC work in the first place, which denies authorship to these contributors.
- ³⁴ *Childress v. Taylor* [1991] 945 F. 2d. 500.
- ³⁵ This is reflected in the classical criterion of originality in French copyright law which requires that the work reflects the stamp of the author's personality (Vivant & Bruguière, 2013, p. 266). In the UK, originality is defined as origination in the sense that the work originates from the author's skill, labor and judgment (Bently & Sherman, 2014, pp. 96–97).
- ³⁶ *McMillan and Company Ltd. v K and J Cooper* (1924) 40 TLR 186,188.
- ³⁷ *Interlego v. Tyco Industries* [1989] AC 217, 268.
- ³⁸ *Le Prince Igor* Paris 7e ch. 8 juin 1971: D 1972 383.
- ³⁹ See also Clément-Fontaine (2014, p. 282) who is also of the opinion that such a spiritual intimacy cannot be attributed to collaborators of an open work due to an absence of direct interaction among them.
- ⁴⁰ *Robin Ray v Classic FM* [1998] FSR 622
- ⁴¹ *Hadley v Kemp* [1999] EMLR 589
- ⁴² *Stuart v Barrett and Others* [1994] EMLR 448
- ⁴³ Dolin distinguishes between the approach of the Ninth Circuit and the approach of the Seventh Circuit that uses an intent-based test that require contributors to prove intention to merge their contributions into a single work.
- ⁴⁴ *Aalmuhammed v Lee* [2000] 202 F. 3d 1227.
- ⁴⁵ *ibid* at p. 1235.

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