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# COURT STANDARDS ON JOINT INVENTORSHIP & AUTHORSHIP

Kan: Court Standards on Joint Inventorship & Authorship

By Steven S. Kan<sup>1</sup>

## ABSTRACT

Sequential workflow steps in creating knowledge works and complementary intellectual endeavors in collaboration are focused to reveal opportunistic behaviors lurking in the step of fixing intellectual fruit into a tangible medium and the control of decision-making authority over a knowledge project. A review of frequently cited cases shows that joint inventorship standards are efficient, while joint authorship standards developed recently are inefficient. The root cause of the disparity is traced to the copyright law's failure to insist on the truthful identity of the subject making intellectual contribution, for which patent law even mandates a patent invalidation when necessary.

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1. Visiting Professor, Graduate Institute of Law and Economics, College of Economics, Zhejiang University. I am grateful to Dean Jin-Chuan Shi for relieving some of my teaching duty, to Professors Tze-Shiou Chien and Chun-Sin Hwang for helpful comments and suggestions, and to former thesis student Lydia Liu for inspiring me into this interesting research. For previous drafts leading to this Note, I appreciate the encouragement and feedbacks of law and economics seminar participants at Nanjing University of Science and Technology, Zhejiang University, and National Tsing Hua University, and conference participants at Taiwan's First Conference on Empirical Law Research and the Sixth Chinese Law and Economics Forum. Any merit of this note is God's grace; all errors are mine.

## I. INTRODUCTION

Intellectual collaboration has become almost indispensable in knowledge creation as a result of structural changes in technology and economic development. Attribution of an inventor or author offers fame as well as some other organizational functions and, as elucidated by Professor Catherine Fisk, has a social value separate from ownership.<sup>2</sup> The value of sole attribution is usually higher than that of joint attribution and their difference may create room for opportunistic behaviors,<sup>3</sup> thus, court standards in resolving joint inventorship and authorship disputes are important to the development of a knowledge based economy. Nevertheless, recent growing concerns with misattribution suggest that the existing stocks of court standards on attribution disputes are somewhat deficient in protecting true inventors and authors.<sup>4</sup>

Two types of errors in inventor attribution are identified in patent law.<sup>5</sup> The first type of error, nonjoinder, occurs when a true inventor is not attributed in a patent application or a granted patent. The second type of error, misjoinder, occurs when an inventor is falsely attributed. Such errors may similarly occur in

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2. See generally Catherine L. Fisk, *Credit Where It's Due: The Law and Norms of Attribution*, 95 GEO. L.J. 49 (2006) (detailing attribution's role in signaling human capital in a knowledge economy).

3. Enforcement of intellectual property helps provide an incentive for collaborative knowledge work of scientific or artistic nature. The difference between sole ownership and equally divided joint ownership of intellectual property may also create room for opportunistic behaviors. Nevertheless, this Note does not consider ownership interest.

4. See, e.g., Sean B. Seymore, *My Patent, Your Patent, or Our Patent? Inventorship Disputes Within Academic Research Groups*, 16 ALB. L.J. SCI. & TECH. 125 (2006), Kyle Grimshaw, *A Victory for the Student Researcher: Chou v. University of Chicago*, DUKE L. & TECH REV. 35 (2001), and Lisa G. Lerman, *Misattribution in Legal Scholarship: Plagiarism, Ghostwriting, and Authorship*, 42 S. TEX. L. REV. 467 (2001).

5. See 35 U.S.C. § 102(f) (2006) ("A person shall be entitled to a patent unless he did not himself invent the subject matter sought to be patented."); 35 U.S.C. § 256 (2006) (correction of named inventor error). "[T]he first and true inventor or discoverer" can be traced all way back to the Patent Act of 1790, ch. 7, § 5, 1 Stat. 109, 111.

authorial attribution of copyrightable works—nonjoinder for a true, but unnamed author, and misjoinder for a named, but false author. Determination of authorship in court, however, is more complicated than that of inventorship because some institutional aspects of copyright law are more susceptible to opportunistic behaviors. For instance, in contrast with patent examination, neither application, registration, nor deposit of an authorial work is required for copyright protection.<sup>6</sup> Thus, while false attribution may be detected during patent examination, aversion to censorship makes early detection of misattribution in an authorial work unlikely. Also, the duration of copyright protection lasts for seventy years after the last surviving author’s death, suggesting a much longer period of opportunistic threat than that under patent law.<sup>7</sup> More importantly, the laws show a drastic difference in dealing with the truthful identity of the subject making the intellectual contribution. Whereas patent law is specific about the two types of attribution error and their correction, copyright law stipulates nothing of the sort.

This Note conducts a comparative evaluation of court standards on joint inventorship and authorship, taking into account opportunistic behaviors and institutional differences between patent law and copyright law. Specifically, my purpose is to distinguish efficient court standards from inefficient ones and find the root cause of this efficiency disparity. The workflow model of knowledge project that includes workflow steps for initiating a project idea, gathering data, conducting experiments, confirming the project idea, instantiating the confirmed project idea, and fixing consistent instantiations in a tangible medium helps fulfill this purpose for two reasons:<sup>8</sup> First, its sequential nature helps capture the above-mentioned institutional differences in the

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6. 17 U.S.C. §§ 407(a), 408(a) (2006) (setting deposit and registration standards, respectfully, for copyright protection).

7. 17 U.S.C. § 302(b) (2006).

8. The workflow model helps establish in a separate paper the proposition that intellectual contribution is the efficient boundary of inventorship and authorship. Consistent with this proposition, American judges have significantly contributed to the development of the United States the world’s knowledge center in the twentieth century. See Steven S. Kan, *The Efficient Boundary of Inventorship and Authorship*, 19 DEPAUL J. ART, TECH., & INTELL. PROP. L. 17 (2009).

creation of scientific and artistic works. Second, with different intellectual collaborators responsible for different workflow steps, it can accommodate complementary intellectual endeavors. The workflow model thus offers theoretical insights into insufficiently recognized opportunistic behaviors lurking in the step of fixing intellectual contributions into a tangible medium and the control of decision making authority over a collaborative knowledge project.

Against this backdrop, frequently cited court cases spanning a period of more than ninety years are carefully reviewed to obtain four major empirical findings. First, consistent with the economic analysis, patent courts' determination of joint inventorship and defeat of opportunistic behaviors have been perfectly efficient.<sup>9</sup> Second, copyright courts' determination of joint authors and the defeat of opportunistic behaviors were similarly efficient until very recently. Third, inefficiency occurred only in joint authorship standards of independently copyrightable contribution, mutual intent, and control that developed after the passage of Copyright Act of 1976. Fourth, the inefficient joint authorship standards were all biased in favor of opportunists and against true authors.

Despite the technical failure of recent courts in heeding the sequential nature of workflow steps and the fact that complementary intellectual endeavors cannot fully account for the efficiency disparity, the technical framework adopted is extremely useful in exposing the issues involved and offering a comparative investigation. After rejecting some institutional factors, the root cause of the disparity is ultimately traced to the copyright law's failure to insist on the truthful identity of the subject making the intellectual contribution, for which the patent law mandates a correction of misattribution, or even a patent invalidation when necessary. This Note concludes that truthful identify of the subject making the intellectual contribution has successfully guided patent courts' development of efficient inventorship standards and should be amended to copyright law as the Pole Star in guiding copyright courts' adventure in joint authorship determination.

The remainder is organized into four sections. Section I

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9. Essentially, court determination in a reviewed case is deemed efficient when litigants without intellectual contribution were denied attribution. Conversely, it is deemed inefficient when a litigant with intellectual contribution was denied attribution.

elucidates intellectual collaboration and its organizational forms to prepare for the analysis of opportunistic behaviors involved in a collaborative knowledge project. The sequential nature of workflow steps and the pure form of complementary intellectual collaboration are the focus of Section II to reveal insufficiently recognized opportunistic behaviors. Against such a backdrop, this Section also reviews Professor David Nimmer's and Professor Paul Goldstein's joint authorship paradigms to show that any requirement of mutual intent is biased in favor of the dominant decision maker and against the true author.<sup>10</sup> Section III summarizes courts' efficient determination of joint inventorship and authorship and successful defeat of opportunistic behaviors. Cases summarized in Section IV reveal the inefficiency of recent joint authorship standards and the unrecognized fate of Nimmer's and Goldstein's paradigms. While the purported standard of mutual intent surprisingly turned into that of superintendence and control, the root cause of their inefficiency is traced to the copyright law's failure to insist on the truthful identify of the subject making the intellectual contribution. Finally, a brief conclusion follows.

## II. INTELLECTUAL COLLABORATION AND ITS ORGANIZATION

No collaboration exists, for instance, in an anthology of several separate short stories, because each writer alone completes all six workflow steps of her story. There is no transaction cost among the writers because they do not interact to connect their stories. For the same reason, there is no collaboration between an inventor of a combination patent and the original patentees, or between writers of a parody and its original song.<sup>11</sup> Collaborative creation

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10. See 1 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* ch. 6 (2007); PAUL GOLDSTEIN, *COPYRIGHT: PRINCIPLES, LAW, AND PRACTICE passim* (2d ed. supp. 2004).

11. No authorization from previous patentees or the original songwriter is required because some new knowledge may pose the threat of Schumpeter's creative destruction to existing knowledge. See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM, AND DEMOCRACY* 82-85 (1975). First Amendment issues and fair use are also involved in parody. See Richard A. Posner, *When Is Parody Fair Use?*, 21 *J. LEGAL STUD.* 67 (1992); Anastasia P. Winslow,

of new scientific or artistic knowledge involves transactions among participants of the knowledge project to organize their workflow steps. A workflow step may be completed by an individual alone or may be completed by two individuals working together; they may also work separately because some endeavors are dividable. Some necessary element for the workflow step's success may be acquired through collaboration with a service provider in the market; others could only result from the synergy of two collaborators. With a slew of dividable endeavors and possible synergy, the workflow model indicates that there are a great number of possible ways to organize collaboration.

There are two types of endeavors associated with a collaborative project. The first is market substitutable and the other is intellectual. A collaborator making market substitutable endeavors simply applies existing knowledge and does not create new knowledge, whereas a collaborator making intellectual endeavors engages in market non-substitutable virtual transactions to create new knowledge. The two kinds of endeavors, however, usually coexist in a collaborative project. For instance, an individual engaging in a virtual transaction with her targeted patrons in mind, for example, patent examiners, journal referees, and promoters of artistic works, can be more focused by hiring an assistant to help out with some chores and the two become collaborators. She may additionally engage another individual with some virtual transaction to save more time for her family. Overall in the collaboration, there are two intellectual collaborators and a market substitutable collaborator. The use of market substitutable collaboration involves insignificant transaction cost, and the use of intellectual collaboration may help lower the high transaction cost associated with a virtual transaction. Neither type of collaboration should be discouraged because they help reduce transaction cost; nevertheless, collaborators who made nothing but market substitutable endeavors should not be granted joint attribution because they only applied existing knowledge.

The remainder focuses on intellectual collaboration. Without loss of generality, only two intellectual collaborators, *A* and *B*, are

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*Rapping on a Revolving Door: An Economics Analysis of Parody and Campbell v. Acuff-Rose Music, Inc.*, 69 S. CAL. L. REV. 767 (1996) (finding courts' applications of the fair use standard in parody cases being inconsistent).

considered in introducing three pure organizational forms of intellectual collaboration. The first is equal intellectual collaboration, where *A* and *B* share equal intellectual endeavors in all steps involved. It suggests that *A* and *B* have similar abilities and coordinate with each other in the workflow steps to save their time and energy for other activities. The second is synergistic intellectual collaboration, where *A*'s intellectual endeavors are disproportional to that of *B*'s throughout all steps. If intellectual endeavor is measured in time, it suggests that *B*'s time spent, however little, is crucial. The reason is that, were it not for the crucial synergy from *B* in clearing out a blind spot, no matter how much more time *A* would spend, she could not complete the step. The third is complementary intellectual collaboration, where *A* and *B* do not make their intellectual endeavors in the same workflow step. It means that *A* and *B* are respectively specialized in different steps and they collaborate for complementary specializations. As suggested, a knowledge creator may need time for other projects, have a blind spot in completing the step, and even lack a required expertise. Actual organization of intellectual collaboration is usually a mixture of pure forms.

Individuals *A* and *B*, nevertheless, must overcome various transaction costs to become intellectual collaborators. Like that in a Coaseian transaction, they need to coordinate with each other for the time, the expertise, and the inhibiting constraints so that each one is assured that the other is reliable in delivering the promised intellectual endeavors. Whether *A* approaches *B* or *B* approaches *A*, they initially may have separate goals, different tastes, and conflicting intellectual constraints. Thus, they need to additionally iron out their differences in cognizing a problem and targeting intended patrons before reaching a shared vision of their intellectual collaboration. After obtaining the shared vision, they also need to settle their differences in approaching and solving the problem and instantiating various aspects of a solution to the problem.

Iterations are usually involved during the process. The additional coordination of virtual transactions with the targeted patrons is at the center of the process; however, there can be no meaningful interaction between the two intellectual collaborators and their targeted patrons. Realistic interactions will not start until



they have invested a significant amount of their time and energy and produced at least some of their intellectual fruits. The transaction cost and risk involved in reaching and maintaining a particular organizational form of intellectual collaboration are apparently much higher than those associated with a Coaseian real exchange. Constitutional promotion of intellectual collaboration for new knowledge creation therefore finds its justification in the transaction cost and risk reduction. As long as *A* and *B* make intellectual contributions from their intellectual collaboration, they should be jointly attributed; therefore, intellectual contribution is also the efficient boundary of joint inventorship and authorship.

The invention or authorial work whose joint attribution is at dispute in court must have been the result of a consistent project that was allegedly collaborative in nature.<sup>12</sup> Insofar as intellectual collaboration worked out between *A* and *B*, its total transaction cost, including both that in reaching a particular organizational form and that in persuading their targeted patrons, should have been lower than that of their originally separate knowledge projects; otherwise, they would have worked alone. In this sense, their intellectual collaboration resulted in a net social gain. Since the chosen organizational form and the social gain took place before the misattribution suit is brought, the court cannot possibly reduce or redistribute the transaction costs that have already incurred. Court decisions, nevertheless, may influence potential intellectual collaborators' choice of a particular organizational form. Since their tastes, visions, abilities, and circumstances are so diverse, there is no *a priori* ground to consider any particular organizational form to be inefficient for intellectual collaborators. The least-cost organizational form can only be worked out by the intellectual collaborators involved. Consequently, it is inefficient for the courts to impede any organizational form of intellectual collaboration—the first result of my transaction cost analysis.

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12. What fixed in a tangible medium, the result of the sixth step, defines the knowledge work at dispute in court. The confirmed project idea and its instantiations, the results of the fourth and fifth steps, must be consistent with what fixed in a tangible medium to form a consistent knowledge project. The separation of attribution and ownership is also assumed. See Kan, *supra* note 8, at 17.

### III. OPPORTUNISM AND JOINT ATTRIBUTION DETERMINATION

Joint attribution determination in court is more than establishing intellectual contribution as the boundary of inventorship and authorship because misjoinder and nonjoinder cases suggest that Professor Oliver E. Williamson's emphasis of opportunism should not be neglected.<sup>13</sup> Opportunistic behaviors lurk in any form of intellectual collaboration, however, it is most acute in the pure form of complementary intellectual collaboration. Below, Subsection *A* focuses on sequential workflow steps and complementary intellectual endeavors to illuminate opportunistic behaviors lurking in the step of fixing intellectual fruits in a tangible medium and the control of decision making authority. As Nimmer's and Goldstein's positions and premises of joint authorship paradigms are closely related, Subsection *B* elucidates common neglect with the cause and consequence of opportunistic behaviors.<sup>14</sup> The analysis shows that both independently copyrightable contribution and mutual intent are biased in favor of the dominant decision maker and against a true joint author. Lastly, in Subsection *C*, complementary intellectual contributions from complementary specializations help lead to the "but for" test of joint attribution determination.

#### *A. Opportunistic Behaviors Lurking in Complementary Specializations*

Complementary intellectual collaboration is advantageous in fully exploiting the benefits of complementary specializations. However, its organization involves high transaction costs. Each

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13. See generally OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1998). The greed for exclusive intellectual property, though not the motivation here, tends to exacerbate attribution-related opportunistic behaviors.

14. Some possible opportunistic behaviors are recognized in authorship guidelines of major research universities and journals. See, e.g., Harvard University, *Authorship Guidelines*, <http://www.hms.harvard.edu/integrity/authorship.html> (last visited Mar. 25, 2009). Despite its obvious preventive implication on authorship guideline, this Note focuses on court standards governing attribution disputes.

intellectual collaborator has an expertise the other does not have; but for her market non-substitutable endeavors, one knows that the other cannot complete the consistent project alone. The exchange of market non-substitutable endeavors between two potential intellectual collaborators thus represents the familiar case of bilateral monopoly. The sequential nature of the workflow steps further indicates that complementary specializations are performed sequentially. As that between two vertically situated firms, the threat of holdup underlies the difficulty in organizing complementary intellectual endeavors.<sup>15</sup>

However *A* and *B* enter into complementary intellectual collaboration, an *ex ante* agreement without an effective enforcement mechanism may be opportunistically relegated *ex post*. For example, suppose that *A* is very imaginative in designing and conducting new experiments, which are crucial for an instantiation of a confirmed project, but very poor in integrating different instantiations in writing, which is *B*'s talent. Apparently, the step of conducting experiments precedes that of instantiating the confirmed project idea. The requirement for legal protection thus indicates that *B* controls the last step of fixing consistent instantiations in a tangible medium. While *B* may disguise that he has not been able to put things together, *A* is trustfully waiting for *B*'s completion of the last step. At the same time, *B* opportunistically files a patent application or copyright registration under his name only.

Whereas asset specificity is prominently featured in holdup literature, institutional sources are more important in considering *B*'s *ex post* opportunistic behavior here.<sup>16</sup> The likely detection of opportunistic first-filing of a patent application in patent interference proceedings suggests that patent law's special

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15. See generally OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975); Oliver E. Williamson, *Transaction Cost Economics: The Governance of Contractual Relations*, 22 J. L. & ECON. 233 (1979).

16. Compare Benjamin Klein, Robert G. Crawford, & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297 (1978) (analyzing the specificity of physical assets), with Robert F. Freeland, *Creating Holdup Through Vertical Integration: Fisher Body Re-visited*, 43 J.L. & ECON. 33 (2000) (emphasizing the specificity of intellectual assets).

attention to the true inventor serves as a mechanism in enforcing the ex ante agreement in complementary intellectual endeavors. Nevertheless, should *B*'s opportunistic behavior occur, *A* would have to bear the burden of proof in court to show that she was indeed the nonjoinder.<sup>17</sup> As logs might not be properly kept or, in confirming a project idea, the intellectual contribution fails to be recorded, the burden of proof works to weaken the deterrence effect of patent interference in discouraging the opportunistic first-filing of a patent application. The copyright law's aversion to censorship similarly suggests that opportunistic behaviors in the first filing of copyright registration under one's own name should be more serious. The same reasoning suggests that such opportunistic behaviors would more likely occur in artistic works than academic papers because the latter are subject to peer review.

As intellectual collaboration has become institutionalized through knowledge teams at big businesses, universities, and government agencies, opportunistic behaviors may also occur when a third person controls the decision-making authority of a collaborative knowledge project.<sup>18</sup> Dominant control of decision-making authority in this sense may even lead to both misjoinder and nonjoinder and make attribution determination more complicated.<sup>19</sup> For instance, suppose the supervisor of *A* and *B* is a senior researcher and controls budgets, labs, and promotions. Once in a while, the supervisor obtains some additional understanding of *A* and *B*'s project through requests for resources or a progress report. At a crucial juncture, the supervisor may hint that he would like to be attributed as the third knowledge creator for his help and suggestions.<sup>20</sup> Conversely, *A* or *B* may be willing

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17. While the standard of proof in civil cases is a mere preponderance of evidence, the hypothetical example in the text implies a fraud and the proof would be elevated to the clear and convincing standard. See, e.g., *Addington v. Texas*, 441 U.S. 418, 424 (1978).

18. It does not violate the funding irrelevance assumption because intellectual collaborators are usually asked to sign an agreement that assigns resulting intellectual property ownership to the funding agency.

19. The author would like to emphasize that the dominance of intellectual content or intellectual process is not criticized here.

20. Rochelle Cooper Dreyfuss, *Collaborative Research: Conflicts on Authorship, Ownership, and Accountability*, 53 VAND. L. REV. 1162, 1207 (2000) (arguing that mutual intent allows the dominant party to "lure others into

to attribute the supervisor for a promotion promise or a lab upgrade.<sup>21</sup> Regardless of whose initiation and the motivation behind, the supervisor would likely turn out to be the third knowledge creator, especially when no pecuniary benefit of intellectual property is involved. When the ownership interest of intellectual property cannot be ignored, true collaborators *A* and *B* would have a strong incentive to resist its dilution such that misjoinder would not occur. Thus, there are data supporting that the supervisor would more likely become a misjoinder in a scholarly journal than in a patent application.<sup>22</sup>

The supervisor may even have an upper hand in faking that he has confirmed the project idea. The reason is that he may be able to collude with *B* in corroborating his false intellectual contribution in confirming the project idea, which would be hard to refute in court because of its purely intellectual nature. As long as the number of total attributions is unchanged, *B* might be indifferent to with whom his name is jointly attributed, unless he pays sufficiently strong deference to honesty and loyalty. The balance would thus be tilted to *B*'s collusion with the supervisor when he could help the paper be published in a more prestigious journal, for example. Similarly, when pecuniary benefits of intellectual property cannot be ignored, *B*'s share in it would be unchanged if the total number of attributions is unchanged. Thus, given that *B* does not object to colluding with his supervisor, he might as well collude in denying *A*'s intellectual contribution and turning *A* into the nonjoinder.

Misjoinder in the collusive inclusion of a supervisor is more like

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contributing material to a unitary work, all the while withholding the intent to share its economic and reputational benefits”).

21. See generally Sean B. Seymore, *How Does My Work Become Our Work? Dilution of Authorship in Scientific Papers, and the Need for the Academy to Obey Copyright Law*, 12 RICH. J.L. & TECH. 11 (2006) (criticizing authorship inflation as a result of academic gifts).

22. Cross comparisons of the common names listed in scholarly journal papers and patents show that the average number of names of the former is greater than that in the latter. Data suggest that there are misjoinders in journal articles. See, e.g., Martin Meyer & Sujit Bhattacharya, *Commonalities and Differences between Scholarly and Technical Collaboration: An Exploration of Co-invention and Co-authorship Analyses*, 61 SCIENTOMETRICS 443 (2004); Philippe Ducor, *Coauthorship and Coinventorship*, 289 SCIENCE 873 (2000).

a victimless crime. Nonjoinder, on the other hand, does involve a victim. In both cases, opportunism and collusion distort the organizational roles of attribution and increase overall transaction costs in society. Sequential workflow steps and complementary intellectual endeavors help reveal opportunistic behaviors lurking in the control of decision-making authority and the step of fixing intellectual fruits into a tangible medium. It indicates additionally that, without paying sufficient attention to institutional backgrounds, courts may not be effective in checking ex post relegation of intellectual collaboration.

### B. *Joint Authorship Paradigms*

Patent law stipulates three allowable conditions for joint application, while copyright law stipulates what constitutes a joint work. Joint patent applications are allowed even when inventors did not (1) physically work together or at the same time, (2) make the same type or amount of contribution, or (3) contribute to the subject matter of every claim of the patent.<sup>23</sup> The allowable conditions are apparently workflow-centered and provide room for inventors to utilize complementary specializations. In contrast, copyright law stipulates four requirements for a legally defined joint work.<sup>24</sup> The first requires that there are two or more authors.<sup>25</sup> The second requires the authors to have the intention to merge their contributions. The third specifies the work as a unitary whole composed of inseparable or interdependent parts. The fourth requires the inseparable or interdependent parts to be those into which authorial contributions are merged. In comparison, a joint invention apparently meets in principle the factors laid out in the

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23. 35 U.S.C. § 116 (2006).

24. 17 U.S.C. § 101 (2006). The definition distinguishes a joint work from a collective or a derivative work. It is essential because joint authors own equal and undivided interests in the whole work, whereas authors of collective and derivative works own only the part of their respective contributions. See § 101(c).

25. Paulette S. Fox, Note, *Preserving the Collaborative Spirit of American Theatre: The Need for a "Joint Authorship Default Rule" in Light of the Rent Decision's Unanswered Question*, 19 CARDOZO ARTS & ENT. L.J. 497 (2001) (reviewing Congress's intent in narrowing the "joint work" definition in the 1976 Copyright Act).

first and the third requirements. Since complementary intellectual contributions can be imbedded in inseparable or interdependent parts, the fourth requirement does not exclude complementary intellectual endeavors. The distinction between joint invention and joint work is, thus, only in the second requirement of intention.

Nimmer's and Goldstein's joint authorship paradigms are closely related to complementary intellectual endeavors and copyright law's second requirement of authorial intention. In addition, the Second and Ninth Circuits have purportedly advocated the two-pronged test of independently copyrightable contribution and mutual intent for joint authorship.<sup>26</sup> The following analyzes the two joint authorship paradigms in light of opportunistic behaviors lurking in complementary specializations.

### 1. *Independently Copyrightable Contribution*

Nimmer's paradigm of joint authorship, in summary, is obtained through the consideration of complementary intellectual endeavors between two individuals, "with *A* contributing sparkling plot ideas and *B* weaving them into a completed screenplay."<sup>27</sup> Thus, Nimmer recognizes that confirming the project idea and fixing consistent instantiations in a tangible medium may be separate workflow steps undertaken by two persons of complementary specializations. Consistent with the first result of my transaction cost analysis, he considers the independently copyrightable contribution requirement for joint authorship to be inefficient and takes the position that "copyright protection should extend both to the contributor of the skeletal ideas and the contributor who fleshes out the project."<sup>28</sup>

In contrast, the Goldstein paradigm is obtained in considering

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26. A search of LexisNexis database shows that the phrase "independently copyrightable contributions" first appeared in the case of *Rohauer v. Killiam Shows, Inc.*, where a derivative work was involved. 551 F.2d 484, 493 (2d Cir. 1977). Adoption of independently copyrightable contributions as a joint authorship standard did not pick up until the late 1980s. A similar search shows that the phrase "mutual intent" first appeared in *Lin-Brook Builders Hardware v. Gerler*. 352 F.2d 298, 300 (9th Cir. 1965). Nevertheless, it only became popularly adopted after the late 1980s.

27. 1 NIMMER & NIMMER, *supra* note 10, § 6.07[A][3][a].

28. *Id.*

whether there should be a “co-ownership interest” associated with a “collaborative contribution.”<sup>29</sup> In this context, Goldstein adopts the position that a person cannot be a joint author unless he has made an independently copyrightable contribution. His position is quite understandable because he is, as Justice Antonin Scalia is in *Dastar Corp. v. Twentieth Century Fox Film Corp.*, concerned with “no discernable limits” to co-ownership interest in copyright.<sup>30</sup> Unlike Nimmer’s explicit reference to plot ideas, which must be intellectual contributions in nature, Goldstein’s “collaborative contribution” seems to include intellectual endeavors as well as market substitutable endeavors. Failing to distinguish intellectual collaboration from market substitutable collaboration, he is left with no choice but to take a stricter interpretation to pin down the limit of co-ownership interest. By requiring that each joint author must contribute “original expression that could stand on its own,” the Goldstein paradigm nevertheless precludes complementary specializations and is inefficient.

## 2. *Mutual Intent*

Nimmer and Goldstein, nevertheless, share a common view on copyright law’s intention requirement. Before stating his stricter interpretation of joint authorship, Goldstein explicitly writes, “[f]or a joint work to exist, *each author must have intended to create a joint work at the time he made his contribution.*”<sup>31</sup> On the other hand, Nimmer’s view is reflected in his position that “given the requisite *preconcerted intent*, there should be no further requirement that *A* and *B* each independently contribute copyrightable expression.”<sup>32</sup> The “preconcerted intent” qualification is clear since there is also the premise that *A* and *B* are collaborators working “in furtherance of a common design.” Thus, contrary to the general impression, Nimmer considers mutual intent highly and may even agree with Goldstein’s stand-

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29. GOLDSTEIN, *supra* note 10, at 4.2.1.2.

30. *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23, 35 (2003); *see also* Kan, *supra* note 8, section I.C.

31. GOLDSTEIN, *supra* note 10, at 4.2.1.2 (emphasis added).

32. 1 NIMMER & NIMMER, *supra* note 10, § 6.07[A][3][a] (emphasis added).



alone authorship in the absence of preconcerted intent.<sup>33</sup>

There are, however, two subtle differences between Nimmer's and Goldstein's interpretations of the intention requirement. First, while Nimmer's is arguably more about joint authorship, Goldstein's is clearly about joint work. It is not only perceivable but also true that two collaborators intending to create a joint work may not share mutual intent to be joint authors.<sup>34</sup> Therefore, it is uncertain how intention for joint work can be translated into mutual intent for joint authorship. Second, with regard to the time when intention is manifested, while Nimmer suggests a time before any intellectual contribution is made, Goldstein's was at a much later time when "he made his contribution."<sup>35</sup> Despite the subtlety involved, the differences would not matter if opportunistic behaviors do not occur. As two sides of the same coin, there can be no joint authors without a joint work and no joint work without joint authors.<sup>36</sup> Intention to create a joint work is not equivalent to intention for joint authorship only when opportunism sets a wedge and splits the coin apart. Similarly, the preconcerted intent and the intention manifested when contribution was made are not equivalent only if some opportunistic behavior occurred during the intervening period.

### 3. *Objective Indicia*

A written agreement by *A* and *B* satisfying the test of mutual intent cannot preclude the possibility that it was out of collusion.

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33. See David Nimmer, *Copyright in the Dead Sea Scrolls: Authorship and Originality*, 38 HOUS. L. REV. 1, 159 (2001) (arguing that "copyright law is remarkably unconcerned with any theory at all about what constitutes authorship—with one single exception: intentionality").

34. The point is well recognized in 1 NIMMER & NIMMER, *supra* note 10, § 6.07 [B].

35. Several courts sided with Goldstein by citing the legislative history of the 1976 Copyright Act, which stated, that "[t]he touchstone here is *the intention, at the time the writing is done*, that the parts be absorbed or combined into an integrated unit." See, e.g., *Erickson v. Trinity Theatre*, 13 F.3d 1061, 1068 (7th Cir. 1994) (quoting H.R. REP. NO. 94-1476, at 120 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5735).

36. For the purposes of this Note, the exceptional case of ghost writers need not concern us.

For example, a dominant supervisor might have colluded with *B* in a written agreement showing their mutual intent to be joint authors such that *A* became the nonjoinder, when *A* in fact made some intellectual contribution. It may further happen that, while *B* and *A* reached a written agreement showing mutual intent to be joint authors, *B* and the dominant supervisor also reached just that. When *A* turned out to be the nonjoinder and claimed joint authorship in court, how would the court reconcile the two different written agreements into a unitary whole? Should transitivity be adopted such that the supervisor, *A*, and *B* are all joint authors? The problem would be even more complicated when intellectual contributions were made and written agreements were entered into at different times, in light of the subtle difference between Nimmer's and Goldstein's interpretations of the required intent.

As litigation involves significant costs, intellectual collaborators who sincerely intended to be joint knowledge creators would rarely end up seeing each other in court.<sup>37</sup> When there was no written agreement, courts' practice of fact-finding in search of other evidence showing mutual intent to be joint authors is also intriguing. Purportedly, the practice may serve some purpose when opportunism is involved. The best argument is that objective indicia from "billing and credit, *decision making*, and the right to enter into contracts" exist.<sup>38</sup> However, these objective indicia cannot withstand the test of opportunism. The fact-finding practice presumes those who claim or defend joint authorship understand the legal consequences of their prior acts, despite vague legal terms. Additionally, they would act accordingly because they knew they would be held responsible for their acts.<sup>39</sup> An ordinary person endeavoring to make intellectual contributions for a knowledge work is apparently too simplistic and occupied to

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37. Consideration of carelessness, inconsistency, or sheer stupidity is unnecessary since what is at issue here is not fact-finding for all evidence but fact-finding in support of mutual intent.

38. *Thomson v. Larson*, 147 F.3d 195, 201 (2d Cir. 1998) (citing *Childress v. Taylor*, 945 F.2d 500, 508-09 (2d Cir. 1991)) (emphasis added). Courts have thoroughly discussed justifying the use of such objective indicia. See discussion *infra* Section IV.B.

39. The district court in *Thomson* explicitly denied such presumption. See *Thomson*, 147 F.3d at 202 n.18.

fit the presumption. Nevertheless, it perfectly fits an opportunist in a different way. The reason is that an opportunist enjoys misappropriating other's intellectual fruit and would do whatever necessary to keep him from being caught. The behavioral asymmetry indicates that there could only be two possible results of such fact-finding practice. First, the victim of opportunistic behaviors, a nonjoinder, could not possibly present sufficient evidence showing mutual intent. Second, the opportunist would act consistently, such that no evidence showing his intention to include the nonjoinder could be found.

The following two recent cases illustrate how a supervisor's opportunistic behavior may be neglected in court. In the case of *Chou v. University of Chicago*, the plaintiff's advisor and department chairman denied her attribution and became the sole inventor of her research result.<sup>40</sup> One of the case's facts states that "[t]he work at the laboratory was, by policy, not to be disclosed outside the laboratory until [the chairman] approved public disclosure."<sup>41</sup> The quote reveals an example of the many ways that a supervisor in control of decision making over the fixing step of a knowledge project may use his power in defining the knowledge work, the time of its completion, its significance, its fate, and its attribution in his own favor. Despite the fact that the plaintiff had faithfully spent intellectual endeavors to complete her research, the opportunistic supervisor betrayed her and misappropriated her intellectual contributions. Goldstein's intention at the time "when contribution was made" thus could not help resolve the nonjoinder problem even if the plaintiff had standing to sue.<sup>42</sup>

Moving the clock back to Nimmer's time before any contribution was made does not help either. In another case, *Johnson v. Schmitz*, the plaintiff alleged that two professors on his

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40. See *Chou v. Univ. of Chi.*, No. 99 C 4495, 2000 U.S. Dist. LEXIS 2002, at \*2-3 (N.D. Ill. Feb. 18, 2000), *rev'd* 254 F.3d 1347 (Fed. Cir. 2001).

41. *Id.* at \*4.

42. The district court held that, without ownership interest, the plaintiff lacked a standing to sue for correction. *Id.* at \*6. Finding that the lower court ruled erroneously, the appellate court reversed the district court's holding and held that the plaintiff could seek correction sans an ownership interest. *Chou v. Univ. of Chi.*, 254 F.3d 1347, 1358 (Fed. Cir. 2001) ("[The plaintiff] should have the right to assert her interest, both for her own benefit and in the public interest of assuring correct inventorship designations on patents.")

dissertation committee misappropriated his ideas and published them in a journal without attributing him.<sup>43</sup> Initially, Johnson discovered two other student workers reading his private journal. Later, he overheard them explaining its contents to a professor. Then, the professor asked him to explain his ideas by telling him that “in order to complete his dissertation and pass his qualifying exam, *he would have to trust the faculty.*”<sup>44</sup> The two professors, however, proved to be untrustworthy because they, before misappropriating his ideas, discouraged Johnson from pursuing his ideas further during his qualifying exam. The case thus confirms why a student could not, at any time, obtain from opportunistic professors a written agreement showing preconcerted intent to be joint authors.

Mutual intent for joint inventorship or authorship is susceptible to opportunistic behaviors lurking in the control of decision-making authority and to the step of fixing intellectual fruits in a tangible medium. The recent turn into requiring mutual intent thus amounts to imposing a strict burden on the more vulnerable, innocent intellectual collaborator.<sup>45</sup> If the mutual intent requirement was intended to check opportunistic behaviors, then it was wrongly directed and futile. Should it work in reducing suits brought to court, it would deter true knowledge creation and encourage opportunistic behaviors from dominant decision makers. In sum, mutual intent for joint authorship, in whatever sense, is biased in favor of the dominant decision maker and against the true joint knowledge creator—the second result of my transaction cost analysis.

### C. *The “But For” Test for Joint Attribution Determination*

Taking into account the intellectual contribution as the efficient boundary of joint inventorship and authorship and heeding opportunistic behaviors lurking in complementary specializations,

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43. *Johnson v. Schmitz*, 119 F. Supp. 2d 90, 91-92 (D. Conn. 2000).

44. *Id.* at 91 (emphasis added).

45. In England, there is no such a requirement of mutual intent to be joint authors. Lior Zemer, *Is Intention to Co-Author an “Uncertain Realm of Policy”?*, 30 COLUM. J.L. & ARTS 611, 611 (2007) (arguing that the mutual intent requirement only creates a system that is uncertain).

the following “but for” test is proposed for joint attribution determination. The test examines actual endeavors during the process-centered workflow steps and looks for the truthful identities making complementary intellectual contributions. It is based on the fact that intellectual contributions from complementary specializations are complementary to each other—but for *A*’s intellectual contribution, *B* cannot complete the consistent project, and vice versa.<sup>46</sup> There are two steps in the test: in the first step, the court determines if complementary intellectual endeavors were involved for the consistent project at issue. If the result of the examination is affirmative, then the court continues to the next step to determine whether both *A* and *B* have made intellectual contributions. If the result of the examination is again affirmative, then both *A* and *B* should be jointly attributed. It is efficient in the sense that it neither wastes time and energy in finding unreliable and biased evidence that would only support the lack of mutual intent, nor impedes the pure organizational form of complementary intellectual collaboration.

#### IV. EFFICIENT COURT STANDARDS

When some factors set in to obscure a consistent project, the court may fail to recognize complementary intellectual endeavors and the complementary intellectual contributions involved. This Section reviews a number of frequently cited cases and summarizes courts’ careful attention to the consistent project, intellectual collaboration, and complementary intellectual contributions. Subsection A shows particularly how patent courts have arrived at the efficient “but for” test in cases of joint inventorship. Similar joint authorship determination is summarized in Subsection B with particular attention paid to Judge

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46. “But for” causation is a familiar topic in the economics of tort law. It is borrowed here because complementary specializations are clear cut; they either exist or fail to exist. Thus, the proposed “but for” test is free from the concern that clear causation cannot be established. See, e.g., Mark F. Grady, *A New Positive Economic Theory of Negligence*, 92 YALE L.J. 799 (1983); William Landes & Richard Posner, *Causation in Tort Law: An Economic Approach*, 12 J. LEGAL STUD. 109 (1983); Steven Shavell, *An Analysis of Causation and the Scope of Liability in the Law of Torts*, 9 J. LEGAL STUD. 463 (1980).

Learned Hand's insights. The cases also show that mutual intent to be joint inventors or authors was considered but not required. Subsection C then presents several cases showing that courts have successfully defeated a variety of opportunistic behaviors in misattributing a true joint inventor or author. Despite institutional differences between patent and copyright laws, they serve as a background to Section IV's trace of the root cause of recent inefficient joint authorship standards.

*A. The "But For" Test in Joint Inventorship Determination*

In the early twentieth century case of *William R. Thropp & Sons Co. v. De Laski & Thropp Circular Woven Tire Co.*, the court's identification of the consistent project was not altered by the appellant's challenge that the employee could not be a joint inventor.<sup>47</sup> After examining the workflow steps and endeavors of the listed inventors, the court affirmed that "De Laski's ideas and contributions were so essential and were so related to the conception of Thropp that, *without them, Thropp alone would not have produced the invention* for which the patent was issued."<sup>48</sup> It means, in other words, that but for Thropp's confirmed project idea, De Laski could not have made the design, and but for De Laski's instantiating skills, Thropp could not have finished the inventive project.<sup>49</sup> In light of complementary intellectual contributions, the court correctly reached an efficient decision for the joint inventorship issue.

Different roles of joint inventors were explicitly identified in *Monsanto Co. v. Kamp*.<sup>50</sup> Fact findings showed that Jahn did most

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47. *William R. Thropp & Sons Co. v. De Laski & Thropp Circular Woven Tire Co.*, 226 F. 941 (3d Cir. 1915).

48. *Id.* at 949 (emphasis added).

49. It should be noted here that the "but for" consideration reflected the appellate court's important turn from the district court's opinion, whose allowable conditions for joint inventorship were later transformed into that for joint application in the patent law. *See De Laski & Thropp Circular Woven Tire Co. v. William R. Thropp & Sons Co.*, 218 F. 458, 464 (D.N.J. 1914) ("It is not necessary that exactly the same idea should have occurred to each at the same time, and that they should work out together the embodiment of that idea in a perfected machine.").

50. *Monsanto Co. v. Kamp*, 269 F. Supp. 818 (D.D.C. 1967).

of the detailed experimental work, while the defendant Kamp conducted some of it. They were in frequent consultation with each other, with Jahn reporting laboratory operations and Kamp making suggestions for further work. Kamp's expertise was, thus, more in confirming the project idea, while Jahn's was more in conducting experiments. The court opined, "[t]he fact that each of the inventors plays a *different role* and that the contribution of one may not be as great as that of another, does not detract from the fact that the invention is joint, if each makes some original contribution, though partial, to the *final solution of the problem*."<sup>51</sup> The decision was clearly efficient because the judge had identified the complementary intellectual endeavors and the confirmed complementary intellectual contributions to the consistent project.

The court of *Mueller Brass Co. v. Reading Industries, Inc.* invalidated the plaintiff's patent on obviousness grounds.<sup>52</sup> In addition to adopting tests of market substitutability and confirmed project idea, the court reaffirmed, after almost sixty years, the "but for" test of *Thropp*. Regarding joint inventorship, the court opined, "one need not be able to point to a specific component as one's sole idea, *but* one must be able to say that *without his contribution* to the final conception, it would have been less—less efficient, less simple, less economical, less something of benefit."<sup>53</sup> Despite the fact that the "but for" test is not embodied in patent law, it has become an essential tool for patent courts in determining joint attribution of inventors.<sup>54</sup> Notably, the cases also show that mutual intent and control of decision-making authority were in the courts' consideration but never became standards of joint inventorship.

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51. *Id.* at 824 ("A joint invention is the product of *collaboration* . . . working toward the same end and producing an invention by their *aggregate efforts*. . . . One may do more of the experimental work while the other makes suggestions from time to time.") (emphases added).

52. *Mueller Brass Co. v. Reading Indus., Inc.*, 352 F. Supp. 1357 (E.D. Pa. 1972).

53. *Id.* at 1372 (emphasis added).

54. *E.g.*, *Bontrager v. Steury Corp.*, 457 F. Supp. 526 (N.D. Ind. 1978) (invalidating a patent through the "but for" test).

### B. *Efficient Joint Authorship Determination*

Attention to the consistent project and the “but for” test also stood out prominently in old cases of joint authorship determination. The case of *Maurel v. Smith* was an illuminating example.<sup>55</sup> Facts showed that Maurel had a written scenario and Smith used it to complete the libretto at dispute. A comparison between the completed libretto and the scenario enabled Judge Hand to ascertain the consistent project in the instant case.

It is enough to say that by changes, omissions, additions, and alterations a subsequent author cannot avoid the debt which he owes to *the maker of the plot*, or treat him merely as the suggester of the piece. A scenario followed as much as this goes into *the bone and flesh of the production*.<sup>56</sup>

The scenario and the final libretto were, thus, of a “common design” and there were complementary intellectual contributions in the “whole production.”<sup>57</sup> In other words, the confirmed project idea was the plaintiff’s, and the defendant contributed primarily in modifying the scenario’s instantiations. Not distracted by the defendant’s argument that the plaintiff only made a mere suggestion, Judge Learned Hand gave joint authorship to the plaintiff, the plot maker who confirmed the project idea in his written scenario. He did not require Maurel to have made an independently copyrightable contribution because he looked at the problem from the consistent project perspective and understood that but for Maurel’s intellectual contribution, there could not be the resulting libretto.

In the case of *Edward B. Marks Music Corp. v. Jerry Vogel Music Co.*, Marks intended his lyrics to be set to music and sold them to a publisher, who then engaged Loraine to compose the

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55. *Maurel v. Smith*, 220 F. 195 (S.D.N.Y. 1915).

56. *Id.* at 199 (citation omitted) (emphases added). Maurel initially intended to collaborate with another person to build on the scenario. Smith understood he was to use the scenario in substitution for that person. *Id.*

57. *Id.*



music.<sup>58</sup> The lyricist and the composer, however, never met each other until years later. Almost 30 years after *Maurel*, Judge Hand, sitting on the appellate court, was confronted with a more difficult problem because there was no common design when the lyrics were written.<sup>59</sup> After noting that words and music of a song were to be enjoyed and performed together because they interpenetrated each other and their values could not be separately appraised, Judge Hand introduced two “but for” tests. In the first, he indicated that allowing the lyricist to exclude the melody composer, and vice versa, would amount to a situation where one would “take away the kernel, and leave him only the husk.”<sup>60</sup> Namely, but for their complementary intellectual contributions, there would be no song. Likening the inseparable interests to the threads woven into a seamless fabric, he further reasoned that but for an otherwise advance stipulation, the interest of an undivided whole was not separable. The second “but for” test is especially interesting because what was important to Judge Hand in this case was not mutual intent to be joint authors, but mutual intent to get out of the implied relationship. Thus, he concluded, “it makes no difference whether the authors work in concert, or even whether they know each other; it is enough that they mean their contributions to be *complementary* in the sense that they are to be embodied in a single work to be performed as such.”<sup>61</sup> The explicit recognition of complementary contributions was the key of the case. By focusing on the consistent project involved, Judge Hand arrived at his “but for” tests for complementary intellectual contributions and was not distracted by the lack of mutual intent in

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58. Edward B. Marks Music Corp. v. Jerry Vogel Music Co., 140 F.2d 266 (S.D.N.Y. 1944).

59. Inasmuch as “Marks intended his lyrics be set to music”, the case passed, though indirectly, Goldstein’s intent requirement for a joint work, emphatically not joint authorship. The case might have even motivated Goldstein’s carefully crafted intent requirement.

60. *Marks Music*, 140 F.2d at 267.

61. *Id.* (emphasis added). In comparison with the three allowable conditions for joint inventorship, two strangers could even be joint authors according to Judge Hand. Despite that there was neither a common design nor mutual intent for joint authorship, it was a justifiable decision because there was intention for a joint work and a copyrighted work indeed resulted from a third party’s indirect coordination.

the case.

Consistent project and complementary intellectual contributions were both neglected in the district court but reaffirmed by the appellate court in the similar case of *Shapiro Bernstein & Co. v. Jerry Vogel Music Co.*, where the assignee of Bowman's piano solo invited Sumner to write lyrics for the music.<sup>62</sup> The copyright infringement case involved copyright renewal and was brought to the court thirty years after the song was written, during which period neither Bowman nor Sumner complained. The district court held that they could not be joint authors because its fact-finding showed no evidence of joint authorship intention.<sup>63</sup> Noticing the consistent project involved and adopting Judge Hand's "but for" tests, the appellate court reversed the decision and stated that, "[t]he result reached in the district court would leave one of the authors of the 'new work' with but a *barren right in the words of a worthless poem*, never intended to be used alone."<sup>64</sup> The court checked the music company's opportunistic behavior in acquiring sole copyright ownership thirty years later and reaffirmed that mutual intent was not required when there were complementary intellectual contributions. It is worth noting that complementary intellectual contributions of the three joint authorship cases were not the result of the writers' ex ante, explicit organization of complementary intellectual endeavors. They were instead the result of indirect coordination by a third party. More accurately, with some lapse in time, the intellectual endeavors were complementary only in the ex post sense after the work was completed. Opportunistic behaviors from record companies would creep into these kinds of settings because a written agreement showing preconcerted intent was simply impossible. These joint authorship cases were remarkable and efficient because the courts were able to discern the organizational settings and insist on

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62. *Shapiro Bernstein & Co. v. Jerry Vogel Music Co.*, 221 F.2d 569 (2d Cir. 1955), *superseded by statute*, 1976 Copyright Act, Pub. L. No. 94-553, 90 Stat. 2541, *as recognized in* *Easter Seal Soc'y for Crippled Children and Adults of La., Inc. v. Playboy Enters.*, 815 F.2d 323 (5th Cir. 1987).

63. *Shapiro Bernstein & Co. v. Jerry Vogel Music Co.*, 115 F. Supp. 759 (S.D.N.Y. 1953).

64. *Shapiro Bernstein*, 221 F.2d at 570 (emphasis added). The quote suggests again the origin of Goldstein's authorial intention.

complementary intellectual contributions.

Attention to consistent project and complementary intellectual contributions by courts in joint authorship cases degenerated after the passage of the Copyright Act of 1976 until the recent case of *Gaiman v. McFarlane*.<sup>65</sup> The famous case has been interpreted as one that embraced Nimmer's paradigm of joint authorship, and one that broke away from Goldstein's joint authorship standard of independently copyrightable contribution.<sup>66</sup> Judge Richard Posner's court opinion showed some consistency with my economic analysis. In addressing whether the comic book characters were copyrightable, he paid attention to not only the interpenetrating nature of literary description combined with a drawing, but also the instantiations of a specific name, appearance, and speech to be a copyrightable character. He was also close to finding complementary intellectual endeavors in the creation of a comic book—"the writer, the penciler who creates the art work [ ], the inker . . . who makes a black and white plate of the art work, and the colorist who colors it."<sup>67</sup> Regarding whether *Gaiman* and *McFarlane* should be joint authors, Judge Posner accepted Nimmer's preconcerted intent and agreed that the two parties have "set out to create a character jointly."<sup>68</sup> Then, he offered an impressive remark, "it would be paradoxical if though the result of their joint labors had more than enough originality and creativity to be copyrightable, no one could claim copyright. That would be *peeling the onion until it disappeared*."<sup>69</sup> It vividly resembles the remark—"take away the kernel, and leave him only the husk"—offered by Judge Hand. In spite of this close resemblance, Judge Posner relied in part on Nimmer's preconcerted intent for his decision and was short of reaffirming Judge Hand's "but for" tests

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65. *Gaiman v. McFarlane*, 360 F.3d 644 (7th Cir. 2004).

66. Teresa Huang, Note, *The Right Step in Determining Joint Authorship for Copyrighted Material*, 20 BERKELEY TECH. L.J. 673 (2005) (arguing that Judge Posner's decision accorded with Nimmer's view and would foster creativity).

67. *Gaiman*, 360 F.3d at 659. His finding was not exact because the quote indicated only a division of labor. Taking it carelessly, one may mistakenly consider that an inker or a colorist can unconditionally become joint authors without making intellectual contribution.

68. Nevertheless, there was neither written agreement on joint authorship nor copyright assignment between *Gaiman* and *McFarlane*. *Id.* at 650.

69. *Id.* at 659-60 (emphasis added).

in *Edward B. Marks* more than sixty years earlier. Additionally, the independently copyrightable contribution standard purportedly abandoned by Judge Posner was exactly what Judge Hand did not support in *Maurel* more than ninety years ago. The much acclaimed adoption of Nimmer's paradigm suggests that opportunistic behaviors lurking in the standard of mutual intent for joint authorship still remain insufficiently recognized.

### C. *Opportunistic Behaviors Defeated*

Since *Mergenthaler v. Scudder*, patent courts were meticulous in defeating opportunistic behaviors to misattribute other person's intellectual contribution.<sup>70</sup> The case of *Applegate v. Scherer* revealed how easily a client could cook up a patent application based on a salesman's disclosure, through a letter, of his company's new chemical compound.<sup>71</sup> The court found the letter to meet the test of conception and constitute a full disclosure of the invention. Being fully aware of opportunism inherent with the sequential nature of workflow steps, the court understood that once instantiations of inventive ideas were completed and disclosed they could be easily reduced to practice and misappropriated. Considering disclosure and communications of patentable invention to be beneficial, the court defeated the opportunistic behavior in the race for the first filing of patent application.<sup>72</sup>

*Morse v. Porter* showed a more sophisticated opportunistic behavior in patenting a very close business partner's intellectual contribution.<sup>73</sup> Morse contacted Winch to supply fabrics for his tests of a new molded sanitary napkin. Different fabric materials were requested when tests failed. Though Morse did not reveal his purpose, Winch pretty much guessed what Morse was up to, and when it was close to a breakthrough, they separately filed patent

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70. *Mergenthaler v. Scudder*, 11 App. D.C. 264, 276 (D.C. Cir. 1897).

71. *Applegate v. Scherer*, 332 F.2d 571 (C.C.P.A. 1964).

72. The court rejected that "one could never communicate an invention thought up by him to another who is to try it out, for, when the tester succeeds, the one who does no more than exercise ordinary skill would be rewarded and the innovator would not be." See *id.* at 573-74.

73. *Morse v. Porter*, 155 U.S.P.Q. (BNA) 280 (Pat. Off. Board Pat. Interferences 1965).

applications. The court found that Morse claimed only the new napkin, whereas the Winch application claimed both the fabrics and its combination in the sanitary napkin. Morse won the case when the court opined, “[t]his examination and testing Morse was competent to do by experience and test facilities, and this he did.”<sup>74</sup> Winch was the defeated opportunist because in the consistent project perspective the court was able to tell that he was only a market supplier of the requested fabrics and did not make specific intellectual contribution with respect to the new sanitary napkin.

During the litigation process of *Kimberly-Clark Corp. v. Proctor & Gamble Distributing Co.*, the defendant requested the court to order the naming of Buell and Blevins as joint inventors.<sup>75</sup> Were the allegedly unintentional error in naming joint inventors corrected, the defendant’s patent would have priority over the plaintiff’s. The district court found, instead, that the defendant worked alone and knew nothing of the earlier work of Buell and Blevins and that Buell and Blevins knew nothing of the defendant’s work. Consistent with the workflow model, the court insisted on the examination of who did what in the claimed collaborative efforts to defeat the opportunistic behavior. The priority contest case also suggests competition in first-to-invent to be a reason why mutual intent never reached the level of a joint inventorship standard.<sup>76</sup>

The court in *Mattor v. Coolegem* similarly examined workflow steps and associated intellectual contributions to defeat the defendant’s argument.<sup>77</sup> Earlier, a lab assistant was incorrectly listed as a joint inventor with his employer in a patent application and the misjoinder was corrected during patent examination. Surprisingly, the defendant of the case argued in court that the issued patent was invalid because the true inventor should have been the lab assistant. The lab assistant hired to follow the sole inventor’s instructions to conduct experiments, nevertheless, came

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74. *Id.* at 283.

75. *Kimberly-Clark Corp. v. Proctor & Gamble Distrib. Co.*, 973 F.2d 911 (Fed. Cir. 1992).

76. It also raises a doubt in requiring mutual intent for joint authorship because, to some degree, copyright registration is similarly susceptible to opportunistic first filing.

77. *Mattor v. Coolegem*, 530 F.2d 1391 (C.C.P.A. 1976).

forward to present her notebook in support of her former employer. Consistent with economic logic, the court found the lab assistant's attribution to have been correctly removed during patent examination because her assistance was market substitutable and any other lab assistant could have accomplished the same for the employer.

The court of *Yeda Research & Development Co. v. ImClone Systems Inc.* successfully defeated the worst kind of opportunistic behaviors.<sup>78</sup> Three scientists associated with the plaintiff published their research results as a journal article in 1988 but did not pursue a patent application. It was not until about ten years later that they found that the text and figures of their draft paper had been extensively copied to the specification of a granted patent.<sup>79</sup> This was only possible because the senior-named inventor was previously a colleague of the three scientists. This senior-named inventor was a member of the American Academy of Arts and Sciences, and his publications were among the most cited papers in the world. Being the dominant supervisor who had recruited other named inventors, he was in a better position than that of Winch in *Morse* to collude with the scientists he hired, and having previously given his samples to a true inventor, he argued in the court like the salesman in *Applegate*. Nevertheless, alert in detecting opportunistic behaviors, the court insisted on the detailed examination of all six workflow steps to conclude that none of the named inventors acquired conception to the invention. The court honored the subjects making the intellectual contributions by ordering a correction for the true inventors. The true inventors thus did not need to undertake actual prosecution of a patent application because a hired patent specialist could have completed related market substitutable endeavors. Most of all, like Judge Hand in efficient joint authorship cases, the court did not

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78. *Yeda Research & Dev. Co. v. ImClone Sys. Inc.*, 443 F. Supp. 2d 570 (S.D.N.Y. 2006).

79. *See id.* at 613, 614 (describing circumstances surrounding defendants' "unclean hands"). In a similarly appalling case showing the wholesale copy-and-paste of a published paper to patent application, the plaintiff got back sole inventorship and the defendant was found not qualified as a joint inventor. *See Univ. of Colo. Found., Inc. v. Am. Cyanamid Co.*, 105 F. Supp. 2d 1164 (D. Colo. 2000).

invalidate the patent for lack of intention for a patent.

On the other hand, the infringement case of *Kyjen Co. v. Vo-Toys, Inc.* confirms how surprising and absurd opportunistic behaviors may be associated with a copyrighted work.<sup>80</sup> It is interesting because the defendant counter-argued that the plaintiff's Chinese translator and Chinese manufacturer contributed significantly to the designs and should have instead been the true authors. The defendant's opportunistic behavior failed in part because the Chinese translator and the Chinese manufacturer honestly disclaimed any intellectual contribution.<sup>81</sup> Consistent with the workflow model, the court found that the plaintiff reviewed her sketches, explained marks of the sketches, and discussed how the product should look with her Chinese translator. The plaintiff also reviewed the prototype and explained necessary changes with her Chinese manufacturer. The court reached an efficient decision that the plaintiff was the sole author because she had confirmed and instantiated the consistent project, while international division of labor was utilized to manufacture the products.

Work-for-hire was opportunistically used as the final defense but was ultimately defeated in the frivolous case of *Schmid Bros. Inc. v. W. Goebel Porzellanfabrik KG.*, where the joint authorship of a deceased nun was involved.<sup>82</sup> It was frivolous because the defendant already had an uncontested joint interest of copyrighted works and had no proof whatsoever to disclaim the deceased nun's joint interest. Like *Shapiro Bernstein*, the case confirms that opportunistic behavior is more problematic in copyright than patent cases simply because the duration of protection is much longer. Indeed, betting that heirs of the nun might not have properly maintained the records, the assignee in the instant case stopped paying royalties after the nun died.

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80. *Kyjen Co. v. Vo-Toys, Inc.*, 223 F. Supp. 2d 1065 (C.D. Cal. 2002).

81. Conversely, when a Taiwanese artist completed all workflow steps of a consistent project, the importing company that merely suggested the type of animal to be designed by the artist could not retain authorship. See *Nadel & Sons Toy Corp. v. William Shaland Corp.*, No. 85 Civ. 5108, 1989 U.S. Dist. LEXIS 13305 (S.D.N.Y. Nov. 8, 1989).

82. *Schmid Bros., Inc. v. W. Goebel Porzellanfabrik KG.*, 589 F. Supp. 497 (E.D.N.Y. 1984).

Without going to the detail, a professor's opportunistic behavior against his doctoral student was spotted and checked in the unfortunate case of *Seshadri v. Kasraian*.<sup>83</sup> As the opportunistic behavior was associated with the professor's unilateral withdrawal of a submitted draft paper listing the student as the first author, the case confirms that the long journal review process, like that of patent examination, helps early detection of opportunistic misattribution. Similar to the two earlier cases involving professors, the case further confirms that opportunistic behavior indeed occurred when a dominant supervisor was involved.

## V. INEFFICIENT JOINT AUTHORSHIP STANDARDS

Opportunistic behaviors, of which the above cases were intended to remind, unfortunately went undetected in recent cases adopting inefficient joint authorship standards. This Section shows how a failure to notice opportunistic behaviors lurking in the step of fixing intellectual fruits in a tangible medium, and the control of decision making authority, has led to the copyright courts' predicament. Subsection *A* reveals how judges have utilized confusing standards of superintendence and control rather than take advantage of available tools in their decision-making arsenal. In a comparative review of *Childress v. Taylor* and *Thomson v. Larson*, Subsection *B* further clarifies how an opportunist would always prevail under the standard of mutual intent, which is also shown to be the standard of superintendence and control in disguise.<sup>84</sup> Finally, the root cause of inefficient joint authorship standards is traced in Subsection *C* to copyright law's failure to insist on the truthful identities of subjects making an intellectual contribution.

### *A. Drifting into the Confusing Standard of Superintendence and Control*

Copyright infringement of a film was at issue in the case of

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83. *Seshadri v. Kasraian*, 130 F.3d 798 (7th Cir. 1997). The case was more about the plaintiff's right of integrity not promulgated in the copyright law. *Id.*

84. *Thomson v. Larson*, 147 F.3d 195 (2d Cir. 1998); *Childress v. Taylor*, 945 F.2d 500, 502 (2d Cir. 1991).



*Lindsay v. R.M.S. Titanic*, where the defendants argued that the plaintiff was not the author because he neither dove underwater nor photographed the wreckage.<sup>85</sup> After examining the plaintiff's endeavors in the workflow steps, the court opined, "[a]ll else being equal, where a plaintiff alleges that he exercised such a *high degree of control* over a film operation . . . such that the final product duplicates his conceptions and visions of what the film should look like, the plaintiff may be said to be an 'author.'"<sup>86</sup> As the plaintiff clearly made intellectual contributions, the court's decision was certainly correct. The same decision could, nevertheless, have been reached through Justice O'Connor's finding in *Feist Publications, Inc. v. Rural Telephone Service Co.*, a case decided less than ten years before *Lindsay*, because diving and photographing underwater were nothing but "sweat of the brow".<sup>87</sup> The court's creation of the new term "high degree of control" was unnecessary and confusing because it may be expanded to mean something other than an intellectual contribution.<sup>88</sup>

Such unnecessary confusion indeed occurred, and was further exacerbated, in the case of *Aalmuhammed v. Lee*, where the plaintiff alleged to be a joint author of the movie *Malcolm X*.<sup>89</sup> As to the plaintiff's claim, the court opined that "Aalmuhammed did not at any time have superintendence of the work . . . Aalmuhammed lacked control over the work, and absence of control is strong evidence of the absence of co-authorship."<sup>90</sup> There were two related impetuses behind the court's preference for "superintendence" and "control". First, the court was confronted with too many possible authors for a movie and considered the

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85. *Lindsay v. R.M.S. Titanic*, No. 97 Civ. 9248, 1999 U.S. Dist. LEXIS 15837 (S.D.N.Y. Oct. 12, 1999).

86. *Id.* at \*15-16 (emphasis added). The defendants' argument that the photographer should be a joint author was rejected as well. *Id.* at \*20-21.

87. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991).

88. *Cf. Thomson*, 147 F.3d at 202 (emphasizing "decision-making authority over what changes are made and what is included in a work"); *Erickson v. Trinity Theatre, Inc.*, 13 F.3d 1061, 1072 (7th Cir. 1994) (where it was conceded that Erickson had complete discretion over what was included in the play, there could be no joint authorship).

89. *Aalmuhammed v. Lee*, 202 F.3d 1227 (9th Cir. 2000).

90. *Id.* at 1235.

standard of copyrightable work set forth in *Feist* too broad.<sup>91</sup> Second, independently copyrightable contribution was present in the case because some of Aalmuhammed's script revisions were included in the released version of the film. The court thus resorted to *Burrow-Giles Lithographic Co. v. Sarony* in emphasizing "the person who has superintended the arrangement."<sup>92</sup> Isolating the superintendence aspect, and connecting it with *Thomson's* emphasis of decision making authority, the court concurred with *Lindsay* that "an author 'superintends' the work by exercising control."<sup>93</sup> Nevertheless, in the consistent project perspective, the plaintiff did not make an intellectual contribution in confirming the drama of *Malcolm X*.<sup>94</sup> It could have also been found that his claimed contributions, both as an Arabic translator and in making script changes, were all market substitutable endeavors but not intellectual contributions.<sup>95</sup> Thus, different versions of mere suggestion for an efficient determination of intellectual contribution and authorship were in the court's tool bag but were not employed.

Superintendence and control connote the powers associated with administration and resource allocation, which are apparently not intellectual contributions to a work of authorship. Indeed, more recently, the court in *Caffey v. Cook* strayed into opining that "whether Caffey always exercised the right to absolute *creative control* is irrelevant to whether, in the first instance, he had the *authority* to do so."<sup>96</sup> In another case, *Brown v. Flowers*, a sound

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91. *Id.* at 1232 (candidates for authorship considered by the court include the stars, the chief cinematographer, screenwriters, animators, composers, the director imposing artistic judgments, and the producer raising the money).

92. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 61 (1884).

93. *See Aalmuhammed*, 202 F.3d at 1234.

94. *Id.* at 1229 (Aalmuhammed was hired because he had previously written, directed, and produced a documentary about Malcolm X). The movie *Malcolm X*, however, was an original work with dramatic imagination; nevertheless, the court failed to distinguish the two projects.

95. *Id.* at 1230 (noting that the script changes were a result of Aalmuhammed's role as an editor of a literary work). This market substitutable endeavor was already compensated by Spike Lee for \$ 25,000. *Id.*

96. *Caffey v. Cook*, 409 F. Supp. 2d 484, 499 (S.D.N.Y. 2006) (emphases added).

engineer claimed joint authorship with a musician.<sup>97</sup> The court held that, by only adding riffs and beats, the sound engineer did not make independently copyrightable contributions, and rejected the claim. Referring to the control standard set forth in *Childress* and *Aalmuhammed*, a judge nevertheless dissented in arguing that “[the sound engineer] had *significant decision making authority* over the substance and form of the master recordings.”<sup>98</sup> The dissenting judge further consulted complementary intellectual contributions, as argued in Nimmer’s paradigm and Judge Posner’s *Gaiman* decision, and opined that Brown should be a joint author.<sup>99</sup> However, if his attention was not distracted by the confusing requirement of superintendence and control, he could have simply pulled out from his tool bag Judge Hand’s “but for” test to argue for Brown’s joint authorship in contributing interpenetrating riffs and beats on top of Flowers’ music and lyrics.

The adoption of the superintendence and control standard was also arbitrary. On the one hand, its adoption may falsely protect an opportunist in control of decision-making authority from being effectively challenged by a true author. On the other hand, judges in *Aalmuhammed* adopted it simply to deny joint authorship to the plaintiff, whom the court even considered to have indeed made some independently copyrightable intellectual contribution. In sum, despite the fact that some courts have correctly limited it to mean artistic control, the confusing standard of superintendence and control demonstrates why there is growing concern with joint attribution.<sup>100</sup>

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97. *Brown v. Flowers*, 196 F. App’x 178 (4th Cir. 2006).

98. *Id.* at 191 (Gregory, J., concurring in judgment and dissenting in part) (emphasis added).

99. *See id.* at 189 (Gregory, J., concurring in judgment and dissenting in part) (citing *JCW Invs., Inc. v. Novelty Inc.*, 289 F. Supp. 2d 1023, 1028 (N.D. Ill. 2003) (holding a record producer a joint author for “capturing and electronically processing the sounds, and compiling and editing them to make a final sound recording”) and *Morrill v. Smashing Pumpkins*, 157 F. Supp. 2d 1120, 1122 (C.D. Cal. 2001) (holding that the music video was a joint work and the performer and the producer were joint authors)).

100. *See, e.g.*, *Brod v. Gen. Publ’g Group, Inc.*, 32 F. App’x 231 (9th Cir. 2002) (clarifying artistic control for joint authorship and rejecting necessary superintendence beyond artistic control); *Tang v. Putruss*, 521 F. Supp. 2d 600

*B. The Mutual Intent Standard in Reality*

My case review ends with *Childress* and *Thomson* for two reasons. First, they influenced courts to venture into the confusing standard of superintendence and control. Second, they offered the best arguments for adopting the standard of mutual intent for joint authorship.<sup>101</sup> Since my ultimate purpose is to identify the root cause of the disparity between efficient and inefficient standards, a comparative review in this Subsection is presented to show more clearly how the courts have missed complementary intellectual contributions and opportunistic behaviors, arbitrarily interpreted the pieces of evidence to find a lack of mutual intent, and eventually ushered in the standard of superintendence and control.

A very brief summary of the two cases is in order.<sup>102</sup> Both cases involved joint authorship disputes in a play. In the case of *Childress*, the plaintiff obtained copyright registration in her own name for the play *Moms: A Praise Play for a Black Comedienne* (“*Moms*”) and the defendant argued that she was a joint author. The heirs of a deceased copyright holder were the defendants in *Thomson*, where the plaintiff sought her joint authorship for the play *Rent*. The parties were similarly involved with each other: whereas the plaintiff Taylor invited the defendant Childress to rescue her scripts of the play *Moms*, the defendant Larson invited the plaintiff Thomson to rescue his still-promising scripts of the play *Rent*.<sup>103</sup> There was no written agreement showing mutual

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(E.D. Mich. 2007) (denying opportunistic joint authorship claim for lack of artistic control).

101. The lower court in each case required mutual intent for joint authorship. See *Thomson v. Larson*, 147 F.3d 195, 205 (2d Cir. 1998); *Childress v. Taylor*, No. 87 Civ. 6924, 1990 U.S. Dist. LEXIS 15969, at \*11-12 (S.D.N.Y. Nov. 27, 1990). Upon appeal Judge Jon Newman and Judge Guido Calabresi upheld the lower court decisions and wrote the case opinions supporting the standard of mutual intent.

102. The two cases have been critically reviewed in literature; therefore, I focus only on shedding new light pertaining to the unique points offered in this Note. See generally, e.g., Faye Buckalew, *A Critique of the Law in the Second Circuit Following Childress v. Taylor and as Exemplified in Thomson v. Larson*, 64 BROOK. L. REV. 545 (1998); Fox, *supra* note 25; Jane C. Lee, Comment, *Upstaging the Playwright: The Joint Authorship Entanglement between Dramaturgs and Playwrights*, 19 LOY. L.A. ENT. L.J. 75 (1998).

103. *Thomson*, 147 F.3d at 200 (“Taylor convinced playwright Alice

intent for a joint work or joint authorship in either case. The nonjoinders, Taylor and Thomson, lost their suits against the copyright holders, Childress and Larson. Both courts purportedly adopted Goldstein's paradigm of joint authorship; nevertheless, the court in *Childress* did not determine whether Taylor made an independently copyrightable contribution, whereas the *Thomson* court noted that Thomson indeed made some independently copyrightable contribution to the *Rent* scripts.<sup>104</sup> Both nonjoinder claims, however, were ultimately rejected because there was no evidence supporting an intention to include the nonjoinder as a joint author.<sup>105</sup>

### 1. *Joint Works Unidentified*

Contrary to what was suggested by the rejection of the nonjoinder claims, both plays should have been legally defined joint works. The reasons were clearer in *Thomson*, where the musical *Rent* was originally a collaborative project between Aronson and Larson. Larson's later development of scripts over the next three years garnered some favorable reception and the work was considered promising; however, the professional consensus was that "it needed a great deal of work."<sup>106</sup> Through Thomson's rescue, the resulting "October version" of the play *Rent* was characterized by experts as "a radical transformation of the show," and since its opening on Broadway the show "has been an astounding critical, artistic, and commercial success."<sup>107</sup> In the consistent project perspective, there were complementary intellectual endeavors, though not of the pure form. With Larson confirming the project idea as well as instantiating promising

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Childress to *rescue* the project by writing a new script." (emphasis added)); *Childress v. Taylor*, 945 F.2d 500, 502 (2d Cir. 1991).

104. See *Thomson*, 147 F.3d at 200-01 ("Thomson made at least some non-de minimis copyrightable contribution." (internal quotation marks omitted)).

105. See *id.* at 206-07 (opining that "Jonathan Larson lacked the requisite intent to accept Lynn Thomson as a co-author of *Rent*"); *Childress*, 945 F.2d at 509 (concluding that there was no evidence present supporting "that Childress shared Taylor's notion that they were co-authors" (internal quotation marks omitted)).

106. *Thomson*, 147 F.3d at 207.

107. *Id.* at 198.

lyrics and Thomson instantiating the superbly artistic scripts, their complementary intellectual contributions were inseparable or interdependent parts merged to the unitary whole that has since won the Pulitzer Prize and Tony Award.

Since contribution, as Nimmer’s plot idea, was heretical for joint authorship at the time, it was more difficult for the *Childress* court to find complementary intellectual contributions. Four major facts, however, support that Taylor confirmed the plot idea of the play *Moms*, while Childress instantiated the confirmed project idea.<sup>108</sup> First, before she sought Childress’ help, Taylor had a script for a play about the black comedienne.<sup>109</sup> Second, before she recruited Childress, Taylor obtained a conditional promise from Green Plays Theatre to stage her play.<sup>110</sup> The conditional promise was that improvements should be completed in six weeks, which suggests that, however unsatisfactory Taylor’s script and primitive her plot idea were, Green Plays Theatre was persuaded into giving Taylor a chance for their successful improvement within the required time. Third, Childress was initially not interested in writing the scripts, and she was reluctant in accepting Taylor’s invitation because she would only have six weeks to modify the scripts. In comparison, it took Thomson seven months to complete artistic instantiations of the *Rent* scripts with Larson, who had already confirmed the project idea and received some promising lyrics. This therefore suggests that Taylor’s scripts and plot ideas were sufficiently ripe to persuade Childress into accepting the rescuing role. Fourth, additional facts indicate that not only had Taylor worked with Childress in confirming improved plot ideas and instilling consistent instantiations, but also that Childress would have otherwise torn apart the script in the six weeks.

The above summaries show that, but for Taylor’s intellectual contribution, Childress could not have finished her instantiation to obtain satisfactory scripts in six weeks, and but for Thomson’s intellectual contribution Larson’s *Rent* scripts would have remained only promising. Not being able to examine the cases in

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108. Taylor was a veteran actress and Childress was a playwright who had been an “Obie” award winner. *Childress*, 945 F.2d at 502.

109. See *Thomson*, 147 F.3d at 200 (“Taylor wrote a script . . . but Taylor was unable to get it produced as a play.”).

110. See *Childress*, 945 F.2d at 502.

the consistent project perspective, the courts failed to find that both plays met the joint work definition. Instead, the courts mistakenly took Taylor for an ordinary research assistant responsible for the step of gathering data and Thomson for a market substitutable dramaturg. As a result, there is a tension between the two case outcomes. While Thomson contributed award-winning artistic scripts but was denied joint authorship, Childress was awarded with sole authorship for scripts that were already next to excellent. Since Larson and Taylor both confirmed plot ideas and contributed some scripts, the tension can also be seen in a different way. That is, while Larson received sole authorship of the play *Rent*, Taylor was rejected as a joint author of the play *Moms*. The outcomes were embarrassing because the true plot maker of the *Moms* scripts and the true playwright of the artistic and award-winning *Rent* scripts were missing. Judge Hand did not allow such embarrassment to happen in joint works more than ninety years ago.<sup>111</sup>

## 2. *Unheeded Control of the Fixing Step*

The courts got into such an embarrassing situation also by failing to identify opportunistic behaviors lurking in complementary intellectual collaboration. As analyzed earlier, the sequential nature of workflow steps admonishes that opportunists would usually exploit their control of the fixing step. Also, copyright registration of artistic works is more susceptible to opportunism because prior examination, such as that utilized in patent applications or academic paper submissions, does not exist.

These opportunistic behaviors were clear in *Childress*. Taylor did not write well and her confirmed plot ideas could only be instantiated by Childress. Since both the instantiating and the fixing steps coincided with writing play scripts, Childress was in control of the strategic high ground because she knew when the scripts would be completed and could file immediate copyright

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111. Taylor's plot ideas and Childress's script were as complementary as Loraine's music and Marks' lyrics. See *Edward B. Marks Music Corp. v. Jerry Vogel Music Co.*, 140 F.2d 266 (S.D.N.Y. 1944). Similarly, Larson's scripts and Thomson's scripts were more or less like Maurel's scenario and Smith's libretto. See *Maurel v. Smith*, 220 F. 195 (S.D.N.Y. 1915).

registration on her own. The facts of the case provide clues to Childress' opportunistic behaviors.<sup>112</sup> First, as a veteran script writer, Childress knew the legal consequences of obtaining a copyright registration. Second, despite the letter sent by Taylor to Childress for a joint authorship agreement at an early stage of Childress' writing, Childress did not reply until five weeks later to indicate "originality for her words". Third, Childress thus hurriedly filed copyright registration under her name only as soon as she finished the scripts. Fourth, Childress again hurriedly filed another copyright registration for new materials added to the second production of *Moms* at another theater. Fifth, soon afterwards, Childress rejected another draft agreement proposed by Taylor. Childress had to hurry for the first copyright registration because it contained not only her expressions but also Taylor's intellectual contribution. With learning-by-doing, additional materials instantiated in the revised scripts for the second production would contain relatively more of Childress' intellectual contribution. Thus, by consistently taking two copyright registrations with her name only and showing no intent to have Taylor as a joint author, Childress should at least have been able to secure joint authorship even if the suit were instead brought by Taylor.

The opportunistic behaviors were equally clear in *Thomson*; the only difference was that Larson unexpectedly died just hours after the final dress rehearsal for the play's off-Broadway opening. First, Larson broke his promise to Aronson. When their collaboration ended, Larson promised Aronson that the play's title would always be "RENT a rock opera by Jonathan Larson. Original concept and additional lyrics by Billy Aronson."<sup>113</sup> However, every script brought to the court showed only "*Rent*, by Jonathan Larson." In addition, just nine days before his death, Larson authorized the playbill for the off-Broadway opening to list himself as "author/composer" and Thomson as dramaturg.<sup>114</sup> Apparently, neither gave any indication of Aronson's intellectual contribution. Were the promise kept, the audience would have understood that Larson was more of a composer of the rock music

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112. *Childress*, 945 F.2d at 502-03.

113. *Thomson*, 147 F.3d at 197.

114. *Id.* at 203.



part, but did not contribute as much to plot ideas or lyrics. Second, Larson also broke his promise to Thomson. In her written testimony containing a conversation with Larson, Thomson made it clear that she initially considered herself only as a usual dramaturg and was flattered when Larson unexpectedly asked her to contribute actual language to the script. Her unexpected role was not fanciful but confirmed by a promise she claimed Larson made: "I'll always acknowledge your contribution . . . I would never say that I wrote what you did."<sup>115</sup> The quote might have reflected Larson's true passion, or it might have been meant only to draw out more of Thomson's unique talents. Regardless, the inclusion of Thomson as dramaturg in the playbill did not inform the audience that Thomson made intellectual contributions through superbly artistic instantiations. With Larson listed as author/composer in the playbill, audiences and professionals would instead consider Larson to have contributed all plot ideas, scripts, and music. Larson was able to break his promise because he was in the strategic high ground of both controlling the word processing and storage of *Rent* scripts on his own computer as well as wielding the decision making authority over who would be credited with what.<sup>116</sup>

### 3. *Good Samaritan v. Opportunist*

Taylor and Thomson were Good Samaritans when compared to Childress' and Larson's opportunistic behaviors. Despite the fact that Childress did not respond to her joint authorship proposal, Taylor continued to "help" Childress. Taylor's help included conducting more research at Childress's request, taking her to interviews, and discussing characters and scenes.<sup>117</sup> Similarly, Thomson continued contributing to the *Rent* scripts even after

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115. *Id.* at 205.

116. *Id.* at 197 ("Larson himself entered all changes directly onto his computer.").

117. *Childress*, 945 F.2d at 502. Note that Judge Newman did not characterize Childress's contributions as a "rescue" as Judge Calabresi later did in *Thomson. Childress*, 945 F.2d at 509 ("Childress was asked to write a play about 'Moms' Mabley and did so. To facilitate her writing task, she accepted the assistance that Taylor provided." (emphases added)).

Larson's untimely death.

For the sake of argument, since Taylor supervised the progress of Childress' script writing, she could have seized the opportunity to make a copy of the first draft and file a copyright registration under her name only.<sup>118</sup> Thomson could have also keyed in all her intellectual contributions over Larson's original scripts to obtain a beta version and file for her own copyright registration, while holding back some of her instantiations from Larson. These kinds of preemptive acts could have provided very powerful bargaining chips for a settlement, should Childress and Larson respectively have made a nonjoinder claim. Nevertheless, as Good Samaritans, Taylor and Thomson could never think of such opportunistic acts and would only continue to contribute while waiting trustfully for their joint authorship.

The two cases may, thus, be represented as *Good Samaritan v. Opportunist*. Failing to find complementary intellectual contributions and associated opportunistic behaviors lurking in complementary intellectual endeavors, the courts held the Opportunist to be the sole author on the ground that there was no evidence showing a mutual intent for joint authorship. The fate of Thomson or Taylor was not determined by intellectual contributions but dependent on whether Larson or Childress were Good Samaritans. Consistent with the second result of my economic analysis, the comparative review shows that the defendant in *Good Samaritan v. Opportunist* would always prevail under the adopted mutual intent standard because it is biased in favor of the dominant decision maker and against the true joint author.

#### 4. Three Interrelated Misgivings

The adopted mutual intent standard further shows three interrelated misgivings. First, the outcomes of the two cases were sensitive to the courts' choice of manifested time of intent. The pieces of evidence examined by the courts spanned a period of time; however, the specific time of required intent manifestation

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118. There was an agreement of "\$2,500 to be paid upon submission of the *First Draft*." *Id.* at 503 (emphasis added). Additionally, Taylor regularly supervised the progress of the play. *Id.* at 502.

was never made explicit. Whereas under Nimmer's preconceived intent Taylor's letter to Childress and Larson's promise to Aronson and Thomson could not be easily dismissed, they would be of no force under Goldstein's time when the writing was done.<sup>119</sup> Yet, the courts neither explained why Nimmer's time was not adopted nor indicated whether intent manifested at a later date would carry more weight than that at an earlier date.

Second, there could be no fact-finding result other than insufficient evidence showing the Opportunist's intention to have the Good Samaritan as a joint author.<sup>120</sup> Apparently, if later evidence showing Thomson's outstanding contribution carried more weight, then the court would easily find the true outstanding artistic author embarrassingly missing. Nevertheless, as Larson's earlier refusal to accept assistance could hardly improve the *Rent* script, the court's insistence in awarding him sole authorship could neither enhance his artistic skill in writing. For another example, finding that Larson used the term "co-author" in two separate previous copyright registrations, the court concurred with the lower court that Larson understood the legal significance of the term and conceived "dramaturg" to be a different role. The playbill's "author/composer" was similarly interpreted to affirm Larson's insistence of sole authorship. However, the problematic contradiction would not easily go away, because the slash in "author/composer" and the term "composer" simply did not have any legal meaning.<sup>121</sup>

Third, the standard of mutual intent for joint authorship became indistinguishable from the standard of superintendence and control. As analyzed earlier, an opportunist would act consistently such that objective indicia showing intention to have a joint author could not be found. That the district court found, and the Second Circuit affirmed, that "Mr. Larson never regarded himself as a

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119. If the courts adopted Goldstein's transplanted intent, then none of the courts' objective indicia prior to the completion of the "October version" should be relevant.

120. Because of space limitation, similar criticism against the court's interpretation of *Childress* is omitted.

121. Other inconsistent interpretations appeared as a result of the court's unspecified standard; however, it is not the purpose here to enumerate each and every one of them.

joint author with Ms. Thomson” was thus not a surprise.<sup>122</sup> Since fact-finding through billing, credit, and third-party contracts were circumstantial, a search to ascertain the decision-making authority should be at the center of the adopted mutual intent standard. Indeed, the previously referenced conversation between Thomson and Larson was interpreted not as a broken promise but to show that “the script was within Mr. Larson’s *sole and complete discretion*.”<sup>123</sup> The Second Circuit similarly agreed with the district court’s interpretation of the agreement between Larson and the production theater after the “October version” as showing that “Larson had *final approval* over all changes to *Rent* and that all such changes would become Larson’s property.”<sup>124</sup> Mutual intent was thus only a disguise, and the two cases ushered in the standard of superintendence and control.<sup>125</sup>

The review also reveals an ironic fate of Goldstein’s and Nimmer’s paradigms in reality. The courts, concerned with spurious claims of co-ownership, found independently copyrightable contributions insufficient to narrow down co-ownership interests.<sup>126</sup> Nimmer’s and Goldstein’s mutual intent were similarly deemed unsatisfactory. As a result, the adopted mutual intent standard was rather a mixture that required, without specific reference to Nimmer’s or Goldstein’s time of intent manifestation, some objective indicia to show Nimmer’s intention for joint authorship. This puzzling turn into a relationship-based standard would be fine if opportunism were not a problem.<sup>127</sup> Opportunistic behaviors lurking in the step of fixing intellectual contribution into a tangible medium and the control of decision-making authority, however, were insufficiently recognized to result in a bias favoring the Opportunist and working against the

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122. *Thomson v. Larson*, 147 F.3d 195, 205 (2d Cir. 1998).

123. *See id.* at 203 (emphasis added).

124. *See id.* (emphasis added).

125. *Id.*

126. *See id.* at 200-01; *Childress v. Taylor*, 945 F.2d 500, 508-09 (explaining the courts’ explicit concerns with “no discernable limit” of co-ownership interest).

127. *See Mary LaFrance, Authorship, Dominance, and the Captive Collaborator: Preserving the Rights of Joint Authors*, 50 EMORY L.J. 193, 255 (2001) (criticizing courts’ deviation from the creative process view in legislative history to the implied “relationship test” of mutual intent).

Good Samaritan. Emphatically, it is biased because an opportunist would act consistently so that no evidence other than his own superintendence and control could be found.

### C. *The Missing Grand View of Truthful Identity*

The embarrassing predicament of recent joint authorship standards were indeed results of the courts' failure to notice the emphasized technical considerations. Nevertheless, the old joint authorship cases of *Maurel*, *Edward B. Marks*, and *Shapiro Bernstein* show that, like patent courts, copyright courts were able to appreciate these technical considerations and check opportunistic exclusion of a joint author in copyright registration. The disparity between efficient and inefficient court standards of joint authorship thus hints at a failure beyond technicalities.

The inclusion of both inventors and authors in the same framework of attribution determination is not ambitiously overarching, but rather is advantageous in finding the root cause of the efficiency disparity. As the emphasized technicalities form the common basis of my theoretical analyses, the efficiency disparity from case reviews must come from additional institutional factors asymmetrically influencing the courts.<sup>128</sup> The concern of judges with spurious claims of equal and undivided copyright ownership, however, is not valid because courts in joint inventorship cases shared the same co-ownership concern but did not overlook the opportunistic behaviors involved. The aversion to censorship or prior examination of copyrightable works certainly had a role in *Childress*. Though heirs of Larson were involved in *Thomson*, it was not a case arising from the long duration of copyright protection. Neither institutional factor can be a scapegoat because the courts in *Seshadri* and *Schmid Bros* were also able to defeat the opportunistic claims. Since these surprising turns to inefficient joint authorship standards all occurred after the Copyright Act of 1976, the ambiguous meaning of intention in its joint work definition seems to be a good source of the inefficiency. Nevertheless, the idea of intention was just as ambiguous when

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128. Case reviews are preferred in my research because an econometric study offers little insight beyond the variables selected. Additionally, institutional factors considered here are not variables.

efficient, older cases were decided.

The last institutional source lies with asymmetry in the copyright law patent law's treatments of misattribution. As introduced earlier, whereas the patent law mandates a correction of misjoinder or nojoinder, the copyright law is entirely silent on both types of error in authorial attribution and its correction. Thus, for a copyrighted work, the copyright law misses the grand view of the Constitutional Clause in protecting inventors and authors, and fails to insist on the truthful identity of the subject making intellectual contribution.<sup>129</sup> With truthful identity of an inventor in sight, judges of patent courts have been consistently developing efficient standards of invention conception as well as sole and joint inventorship. Most plausibly, missing the grand view of the truthful identity of an author, courts hearing authorship disputes gradually lost track of the guiding star and were distracted to the concern with spurious claims of co-ownership. As an unintended consequence, inefficient joint authorship standards became recent courts' quid pro quos in limiting the number of equal, undivided co-ownership interests. For the asymmetry in institutional arrangement and the asymmetrical development of court standards, the root cause of the disparity between efficient joint inventorship standards as well as old joint authorship standards and inefficient recent joint authorship standards is ultimately traced to the copyright law's failure to insist on the truthful identity of the subject making intellectual contribution.

## VI. CONCLUSION

Judge Guido Calabresi, with Douglas Melamed as his joint author, long ago recognized that model-building has its shortcomings and compensating advantages.<sup>130</sup> Nobel Laureate George Stigler also once commented that "a . . . more controversial role for economics is in the study of legal institutions

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129. U.S. CONST., art. I, §8, cl. 8 ("To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

130. Guido Calabresi & A. Douglas Melamed, *Property Rule, Liability Rule, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1128 (1972).

and doctrines.”<sup>131</sup> This Note thus does not pretend to have obtained the definition for statutory inventor or author, sole or joint. On the contrary, the emphasized technicalities of structural changes in technology and organization lend support to some statutory ambiguity in their definitions. Because of additional technicalities associated with sequential workflow steps and complementary intellectual endeavors, neither does this Note support obscure statutory definitions susceptible to opportunistic manipulation. What cannot be denied is that tradeoffs inevitably exist in their interpretations, especially because they are not defined. It is also undeniable that judges are charged with the duty to strike a balance as structural changes continue to develop.

Stripping off its technical aspects, this Note considers that judges, like anyone else, need a Pole Star to guide their professional adventures. The truthful identity of the subject making intellectual contributions has been the Pole Star leading patent court judges in developing efficient court standards of sole and joint inventorship. However, in its absence, judges of recent joint authorship disputes could only find independently copyrightable contribution, mutual intent, and superintendence and control as their anchors in the darkness of their joint authorship adventure. The cost is not only that opportunists have recently prevailed in courts, but also that a wasteful race has been unintentionally generated. In contrast to the familiar necessary evil of first-to-invent, the wasteful race is in the control of decision-making authority, especially over the step of fixing intellectual fruits into a tangible medium. Whereas opportunists race to misattribute and misappropriate, Good Samaritans cannot help but join the race for fear of being misattributed and misappropriated.

In conclusion, this Note informs that inefficiency of joint authorship standards can be rectified and the wasteful race can be stopped. First, as my case reviews have shown, finding intellectual contribution and detecting opportunistic behaviors in real cases are operational with the emphasized technical considerations in the tool bag. Second, as patent judges have shown, an amendment of the copyright law to insist on the truthful

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131. George Stigler, *Law or Economics?*, 35 J.L. & ECON. 455, 467 (1992).  
<https://via.library.depaul.edu/jatip/vol19/iss2/4>

identity of the subject making intellectual contribution will provide the necessary guiding light for copyright judges to develop efficient joint authorship standards.



