CO-CREATING EQUALITY

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ABSTRACT

When a creative work has many co-creators, not all of whom contributed equally, how should they split ownership? In the absence of a contract, copyright law has long adopted an all-or-nothing answer to this question: if you are deemed to be a “co-author” you get an equal split; otherwise, you get nothing. Because the privileges of co-authorship are so great, courts have erected an onerous barrier to qualifying as a “co-author”: you must have had “control” over the whole collaborative work. This barrier has been criticized both for being arbitrary and for unfairly resulting in lesser contributors going unrecognized and uncompensated. But removing this barrier—in the context of the longstanding rule granting co-authors an automatic equal split—risks unfairly diluting majority contributors. So, in deciding whether to remove the barrier, we have to balance the perceived unfairness of minority contributors going uncompensated against the perceived unfairness of majority contributors being diluted. In this Article I will show that this question of perceived fairness can be answered empirically.

To determine creators’ revealed preferences for how to treat lesser contributing collaborators, I assemble two datasets. Both datasets are in the core copyright domain where the default co-authorship rules are most relevant: co-songwriting. First, I construct a dataset of the songwriting contribution levels, writing credits, and copyright registrations of every band that has a certified Gold Record and writes its own songs. This is over one thousand music groups. Second, by cross-correlating data released by

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the principal performance rights organizations in response to recent antitrust probes, I estimate royalty splits between the co-writers of over 1.2 million songs. The studies in this Article are the largest and most comprehensive investigation into joint authorship to date that accounts for parties’ contributions.

My primary finding is that the typical behavior of creators is to credit everyone involved in writing as a co-author, even the lesser contributors. A secondary finding is that co-authors who were lesser contributors typically share equally in songwriting royalties. Main contributors thus choose to share much more with lesser contributors than they would be compelled to under current law in the absence of a contract. This revealed preference suggests that we can adopt a more inclusive legal criterion for co-authorship—and in particular remove the arbitrary and exclusionary barrier that to be a co-author one must have control over the entire work—and that we can do so without violating creators’ own sense of fairness. Beyond copyright law and the music industry, these findings have implications for the design of incentives in intellectual property law and creative collaboration more broadly.

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INTRODUCTION

Over the last few decades, people have been collaborating to produce creative works more than ever before, from songs to software. But in the absence of an explicit contract, the law of co-authorship now recognizes as “co-authors” only those contributors who have control over the whole collaborative work.1 This control doctrine2 has been broadly criticized: the doctrine seems arbitrary; it may leave lesser contributors entirely uncompensated; and it may obscure the identities of the lesser co-creators.

Under current law, the question of who counts as a co-author has a lot riding on it. This is because there is a longstanding rule granting co-authors an automatic equal split of royalties.3 Unless they have a contract that says otherwise, the default “equal split” rule is that joint authors share license proceeds equally.4

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1. See infra Section I.C.
2. This is the theory of authorship advanced in Aalmuhammed v. Lee, 202 F.3d 1227, 1234 (9th Cir. 2000) and Erickson v. Trinity Theater, Inc., 13 F.3d 1061, 1068 (7th Cir. 1994), present in Thomson v. Larson, 147 F.3d 195, 202–03 (2d Cir. 1998) as the “decisionmaking authority” factor, and followed in those and other circuits. See infra Sections I.B–C.
3. Statutory law is silent on ownership shares, stating only that the “authors of a joint work are coowners of copyright in the work.” 17 U.S.C. § 201(a). The equal split default was developed as a common law rule. The contemporary common law of joint authorship was codified as part of the Copyright Act of 1976. See infra Sections I.A–B.
4. While the ability to license the work on a nonexclusive basis is only one of a bundle of rights possessed by the copyright holder—the right to transfer the work on an exclusive basis most notable
Thus under current law, outcomes tend to be binary. Either you have control over the entire work, in which case you count as a co-author and by default get an equal split; or you do not, in which case no matter how much you contributed to the final product you are not a co-author and by default receive nothing.

There are three paths forward. One is to maintain the status quo, leaving the control doctrine in place, at the risk of unfairly leaving minor contributors entirely uncompensated (among other problems). A second choice is to remove the control doctrine for co-authorship, while also removing the (more long-standing) “equal split” rule, and make the royalty share proportional to the level of contribution. A third option is to remove the control doctrine but leave the equal split rule in place, at the risk of unfairly diluting the shares of the main authors.

If the wrong choice is made, we risk disincentivizing creative collaboration, either by giving rise to credit allocations that creators view as unfair and demotivating, or at any rate by imposing the transaction costs of having to contract out of them. The important question is then what is fair as judged by the creators7 to whom the default rules apply, not as judged by the general public or by legal scholars. Joint authorship default rules are uniquely relevant for co-songwriting; they are preempted by work for hire or other practices in most other contexts. For this reason, in this Article I will attempt to answer the following empirical question: as revealed by their actions, what do the majority of co-songwriters view as a sensible way to grant co-authorship and split songwriting license proceeds? In particular, how do they treat lesser contributing collaborators?

To pursue these questions, I assemble two datasets. First, I construct a dataset of the songwriting contribution levels, writing credits, and copyright registrations of over one thousand music groups—all band with a certified among them—it is the most economically significant right in most contexts, and therefore the focus of this Article.  


6. See Dan L. Burk & Mark A. Lemley, Policy Levers in Patent Law, 89 VA. L. REV. 1575, 1639 (2003) (“Rules are cheap to administer because they are simple and straightforward, but due to their inflexibility they may lead to costly outcomes if they fit a given situation poorly.”).

7. This appears to be the overriding concern of the courts, although couched in utilitarian language. It may be that courts intuitively recognize the (empirically sound) notion that creators’ perception of fairness can motivate them to create (or demotivate them when perceived fairness is lacking). See Stephanie Plamondon Bair, Rational Faith: The Utility of Fairness in Copyright, 97 B.U. L. REV. 1487, 1502–06 (2017). My argument is rooted in the idea that the utilitarian ends of copyright may, in a joint authorship context, be served by attention to the fairness concerns of co-authors. For a discussion and further empirical support, see Sarah Polcz, Loyalties v. Royalties, HASTINGS L.J. (forthcoming 2023).
Gold Record that primarily releases its own songs, since certifications began to the present (1959–2021). I explore how co-author-crediting decisions are associated with features of the creative context including members’ levels of songwriting contributions, number of collaborators, geography, genre, and era. Second, I extend beyond music groups and explore royalty splits between co-writers for over 1.2 million songs by leveraging the data sharing undertaken by the American Society of Composers, Authors and Publishers (“ASCAP”)8 in response to its ongoing antitrust action. I find that lesser contributors are most often credited as co-authors, and as co-authors they most often share equally in songwriting royalties. The results support the position that calls for rethinking the control doctrine while retaining joint authorship’s equal split default rule.

Part I reviews the history of the equal split rule, the phases of the development of the control doctrine in joint authorship law, and the competing proposals for its revision. Part II makes the case that empirical data can guide our way forward. Parts III and IV present the methodologies and results of two studies. Part V discusses the legal implications of the results.

I. CONTEXT

A co-author who licenses a joint work—for example, allowing a song to be used in a television show—must give their co-authors a share of that money.9 If the co-authors have a contract between them, they receive the agreed amount. Otherwise, each co-author is entitled to an equal share,10 even if the parties have indisputably made unequal contributions to the joint work.11


10. GOLDSTEIN, supra note 9, § 4.2.2, at 4:29 (“Each co-owner’s share of license proceeds will be measured according to a principle of strict equality, and will not be proportioned to the quantity or quality of each co-owner’s contributions to the joint work.”).

A. THE EQUAL SPLIT AND THE “INTENT TO MERGE”

This was not always the case. For the first century after copyright laws appeared in the United States, there was no default rule dictating how to split co-authorship profits, or concerning co-authorship generally. Copyright registration was relatively unimportant for the first century of the United States under the Constitution, for reasons both philosophical and economic. When co-authorship did arise, co-authors settled among themselves whether or not they would share licensing income. The first judicial decision on accounting between co-authors was not until 1874. The court in Carter v. Bailey held that a co-author could license their joint work without their co-authors’ consent and without having to redistribute that licensing income among any co-authors of the work not party to the licensing transaction. The rationale behind this was that the left-out co-authors were equally able to do the same if they put forth the effort, because a license to one person does not use up intangible property. Each co-author owned an


13. See SUBCOMM. ON PATENTS, TRADEMARKS & COPYRIGHTS OF SEN. COMM. ON THE JUDICIARY, 86TH CONG., 2D SESS., COPYRIGHT LAW REVISION: STUDIES NOS. 11–13, at 89 (Comm. Print 1960) (authored by George D. Cary) (“Neither in the hearings nor in the report accompanying the bill that became the copyright law of 1909, does one find a reference to the problems of joint authorship or joint ownership.”) (footnotes omitted); Accountability Among Co-Owners of Statutory Copyright, supra note 12, at 150 (pointing out that no judicial statement on co-authorship had been made in Anglo-American law prior to 1871).

14. Copyright, and intellectual property protection generally, were regarded as species of monopoly, which could lead to political and social corruption. See 1 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 1:18, Westlaw (database updated Sept. 2022). While these protections were regarded as too useful to be abolished, even early supporters like James Madison thought they should be treated with caution. See James Madison, Detached Memoranda, ca. 31 January 1820, NAT’L ARCHIVES, https://founders.archives.gov/documents/Madison/04-01-02-0549 [https://perma.cc/VV9L-SQYX].

15. A calculation by Professor William Patry, placing copyright registrations between 1790 and 1800 at approximately five percent of domestically published books, suggested the local nature of publication, the relative lack of piracy, burdensome formalities of copyright, and the preponderance of British-authored books—for which no protection was available under the Copyright Act of 1790—as prevailing reasons for the lack of registration. PATRY, supra note 14, § 1:19. The expansion of the domestic publishing industry, without a concomitant expansion of domestic authorship, would stymie copyright reform throughout the nineteenth century: piracy of foreign (mainly British) authored works was regarded as a boon to the free spread of ideas throughout the democratic polity. PETER BALDWIN, THE COPYRIGHT WARS 114 (2014). Economically, the primary focus was on the protection of the American publisher—often of unauthorized foreign reprints—rather than the American author. See id. at 118. But in the wake of the transatlantic success of American authors, most significantly Harriet Beecher Stowe’s Uncle Tom’s Cabin, Congress fully extended copyright protection to foreign authors in 1891. See id. at 121–22. The modern period of American copyright could be said to have begun, and the modern period of American joint authorship law would soon follow.

16. Carter v. Bailey, 64 Me. 458, 463 (1874) (“In the absence of any contract modifying their relations, they are simply owners in common . . . each owning a distinct but undivided part which or any part of which alone he can sell, as in the case of personal chattels.”).

17. Id. at 463–64.

18. See id. at 462.
undivided interest in the entire work, and so had the full right to license that property so long as they did not interfere with their co-authors’ rights to do the same. 19 This mirrored the situation with patent co-owners. 20

In the decades that immediately followed Carter, the copyright landscape in the U.S. was transformed by a boom of popular culture and means for its dissemination. By the early twentieth century, entertainment industries were expanding, changing, or being freshly created. 21 Co-authorship grew from the minority case to a common way of producing creative works in important domains. Moreover, dissemination of works was so improved that the circumstances that justified the holding in Carter—that there was no duty to account because one co-author’s licensing of the joint work would not impair the excluded authors’ ability to license it—quite clearly no longer applied. 22 Technologies like radio and film could reach the entire market for a joint work, 23 leaving nothing for excluded authors and thereby effectively destroying the value of the work’s copyright for them. 24

This rule first shifted in 1915 with Maurel v. Smith. 25 In Maurel, three parties agreed to jointly author an operatic work. The plaintiff wrote the plot (the “scenario”), while the first defendant H. Smith translated the plot into script and claimed to have made substantial modifications. The second

20. Id. at 464; see also Theodore R. Kupferman, Copyright—Co-Owners, 19 ST. JOHN’S L. REV. 95, 103–04 (1945); Accountability Among Co-Owners of Statutory Copyright, supra note 12, at 1555.
22. See Accountability Among Co-Owners of Statutory Copyright, supra note 12, at 1556 (contrasting the reach of publication in the time of Carter with the ability to reach “virtually the entire potential audience” with then-contemporary publication).
23. A similar logic was applied in Crosney v. Edward Small Prods., Inc., 52 F. Supp. 559 (S.D.N.Y. 1942) (accounting appropriate between co-owners of motion picture rights where licensing destroys the value of the res).
24. See Shapiro, Bernstein & Co. v. Jerry Vogel Music Co., 73 F. Supp. 165, 168 (S.D.N.Y. 1947). Most later cases recognize—or at least recite—an equitable “constructive trust” basis for recovery, rather than a tenancy in common theory analogizing ouster or destruction of the res. See Maurel v. Smith, 220 F. 195, 201 (S.D.N.Y. 1915) (“[W]hen the Smiths took out these statutory copyrights the literary property, which by publication they used and destroyed . . . .”) Modern cases often leave the legal basis indeterminate. See, e.g., Oddo v. Ries, 743 F.2d 630, 633 (9th Cir. 1984) (describing duty to account as derived from “equitable doctrines relating to unjust enrichment and general principles of law governing the rights of co-owners” (quoting Harrington v. Mure, 186 F. Supp. 655, 657–58 (S.D.N.Y. 1960))).
defendant added lyrics for musical numbers without reference to the plot.\textsuperscript{26} The defendants then registered the copyright for the work without including the plaintiff, blocking her from exploiting her property, as under the 1909 Copyright Act an author’s rights followed from registration.\textsuperscript{27} The court held that the license proceeds were held in a constructive trust for the excluded co-author,\textsuperscript{28} in effect creating a duty to account, because there had been no other way for the excluded co-author to obtain license revenue. Cases following \textit{Maurel}, however, interpreted it as establishing a general duty for co-authors to account to each other for profits.\textsuperscript{29} Moreover, they were to share equally in those proceeds, at least in the absence of a contract stating otherwise. This position has been treated as settled law since it was established more than one hundred years ago.\textsuperscript{30} Courts have not given consideration to uneven shares.\textsuperscript{31}

Importantly, \textit{Maurel} established that contributions to the joint work do not need to be balanced; co-authorship would be found so long as the collaborators share a “common design.”\textsuperscript{32} One defendant had argued that the plaintiff should not be considered his co-author because substantial changes had been made to the plot she contributed,\textsuperscript{33} in essence asserting that his contributions to the totality were significantly greater than the plaintiff’s. On this point, Judge Learned Hand adopted the view put forth in the English case \textit{Levy v. Rutley},\textsuperscript{34} that as long as the parties had agreed upon a common scheme for the joint work there “can be no difficulty in saying that they are joint authors of the work, though one may do a larger share of it than the other.”\textsuperscript{35} Having established that the plaintiff was indeed a co-author with the defendants, Judge Hand found that the copyright was the resulting \textit{res of

\begin{itemize}
\item \textsuperscript{26} The composer was not a party to the suit.
\item \textsuperscript{27} Copyright Act of 1909, Pub. L. No. 60-349, § 9, 35 Stat. 1075, 1077.
\item \textsuperscript{28} \textit{Maurel}, 220 F. at 201.
\item \textsuperscript{29} See, e.g., Jerry Vogel Music Co. v. Miller Music, Inc., 74 N.Y.S.2d 425, 428 (N.Y. App. Div. 1947), aff'd, 87 N.E.2d 681 (1949) (confirming the accounting rule in co-authorship as “promot[ing] sound and orderly marketing of a work and a fair division of profits on the basis of mutual interest”). The case itself concerned, as early joint authorship cases often did, the words and music of a song.
\item \textsuperscript{30} See 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 6.08 (2022).
\item \textsuperscript{31} See Justin Hughes, \textit{Actors as Authors in American Copyright Law}, 51 CONN. L. REV. 1, 66 (2019) (noting that Sweet Music, Inc. v. Melrose Music Corp., 189 F. Supp. 655 (S.D. Cal. 1960) is in the “rare, possibly lone case directly deciding this issue”), a finding with which my research agrees. In \textit{Thomson v. Larson}, 147 F.3d 195, 205 (2d Cir. 1998), plaintiff Lynn Thomson proposed an award of “24 per cent of two-thirds of the authors’ share attributable to the work as a whole, or in other words, 16 per cent,” on the theory that she had co-authored two-thirds (book and lyrics, but not music) of a revised version of \textit{Rent} with Jonathan Larson, 48% of which consisted of new material. Brief of Plaintiff-Appellant at 50, \textit{Thomson v. Larson}, 147 F.3d 195 (2d Cir. 1998) (No. 97-9085). The court appeared to give no consideration to this suggestion.
\item \textsuperscript{32} \textit{Maurel}, 220 F. at 199.
\item \textsuperscript{33} \textit{Id}.
\item \textsuperscript{34} Levy v. Rutley, L.R. 6 C.P. 523 (1871).
\item \textsuperscript{35} \textit{Id} at 530 (opinion of Montague Smith, J.).
\end{itemize}
their three contributions, “and by every equitable rule the defendants hold any legal rights they have upon trust in the same proportion.”

In so declaring, Judge Hand applied the common law of tenancy in common to the parties’ relationship, one of equal ownership by default.

But tenants in common can refute their equal undivided shares by showing evidence of unequal financial contributions to the purchase of the common property. In the case of a joint work, the analog would be to adjust the co-authors’ shares to reflect some proportion of their inputs, whether the relative quantity of their creative contribution or value created. Judge Hand did not address this feature of tenancy in common explicitly, but effectively shut out its application in the case when he took up the claims of the second defendant. The second defendant, R. Smith (brother of defendant H. Smith), argued that he did not need to share with the plaintiff profits resulting from a separate publication of the song lyrics he had written for the opera. Judge Hand took the view that the lyricist could not claim the opera played no role in the later sales success of his lyrics. In a consequential declaration, Judge Hand found determining the contribution of the whole to the success of the part in this manner was not possible. For this reason, the lyricist would be required to split any profits from the separate sale of lyrics equally with his co-authors in the whole opera.

Judge Hand (and decisions accepting the logic of Maurel) treated that reasoning as sufficient to implicate the converse scenario as well: that the particular contribution of any co-author to the success of the whole could not be measured, leading to the generalized pronouncement that when “several collaborators knowingly engage in the production of a piece which is to be presented originally as a whole only, they adopt that common design . . . and unless they undertake expressly to apportion their contributions, they must share alike.”

The underlying causal premises of Judge Hand’s reasoning is that when all authors’ contributions are necessary for a work’s value, the

36. Maurel, 220 F. at 201.
38. This was established by the time Maurel was decided. See, e.g., In re McConnell, 197 F. 438, 441 (N.D.N.Y. 1912) (citing Bittle v. Clement, 54 A. 138 (N.J. Ch. 1903)).
39. Maurel, 220 F. at 200 (“[I]t is impossible to say how much of their vogue was due to [the lyrics] alone, and how much to their presentation along with the opera as a whole . . . . I do not think that it is in the least possible to undertake a satisfactory analysis of the extent of the mutual influences between the parts of such a piece.”).
40. See Edward B. Marks Music Corp. v. Jerry Vogel Music Co., 140 F.2d 266, 267 (2d Cir. 1944) (Hand, J.) (“The popularity of a song turns upon both the words and the music; the share of each in its success cannot be appraised . . . .”)
41. Maurel, 220 F. at 200.
42. Professor Shyamkrishna Balganeshs proposes the application of a Necessary Elements of a Sufficient Set (“NESS”) test to determine whether causation rises to the level of authorship.
degree to which each comparatively adds to that value cannot be assessed. Each contribution has its effect at the level of whether or not it is made (that is, categorical) because the contributions are mutually contingent; in this sense all contributions are equally responsible for the work’s total value. This suggests an equal split because it cannot be said that one person’s contribution is “more” of a cause than another’s.

In Maurel, there was disagreement about the parties’ proportional contributions, as the defendants sought to justify excluding the plaintiff from the copyright registration by minimizing her contribution. But the decision suggests that Judge Hand considered the parties’ true contributions to be of comparable magnitude.\(^43\) It may be for this reason that, after rejecting the possibility of determining the responsibility of each party separately for the opera’s success, Judge Hand did not find it helpful to entertain the alternative of dividing royalty rights according to some measure of each author’s direct inputs. But whatever the reason, this position has been enforced even when parties did not dispute that the co-authors’ contributions to the joint work were not equal. In Sweet Music, Inc. v. Melrose Music Corp.,\(^44\) the assignee of a co-author requested a three-quarter share in a song’s renewal copyright, on the basis that he had written “half the words and all the music.”\(^45\) In the absence of “evidence indicating that the ownership was intended as other than an undivided one-half interest for each of the co-authors,”\(^46\) the court applied the default rule.

When the Copyright Act of 1976 was passed, it left unchanged court-made law on accounting responsibilities of joint authors to one another.\(^47\) Courts had not yet addressed the question of how comparatively lesser a collaborator’s contribution could be while still being fairly entitled to the equal benefits of authorship. No court had given serious reconsideration to Maurel’s assertion that co-authors are entitled to equal shares of proceeds in the absence of a contract. The Copyright Act codified the criteria for joint authorship in Maurel,\(^48\) requiring that collaborators have an intent to merge

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\(^44\) See Maurel, 220 F. at 198.


\(^46\) Id. at 659.


\(^48\) Judge Hand further expanded upon Maurel’s analysis in Edward B. Marks Music Corp. v. Jerry Vogel Music Co., 140 F.2d 266 (2d Cir. 1944), in which joint authorship was used as a defense to
their contributions into a unitary whole.49

B. GATEKEEPING AGAINST LESSER CONTRIBUTORS: FROM “INTENT TO MERGE” TO “INTENT TO BE CO-AUTHORS”

For the first decade after the Copyright Act of 1976 was passed, most courts followed a literal reading of the statute—and, per legislative history, the common law precedent—to decide joint authorship claims. The longstanding rule was that co-authors share equally in the benefits of co-authorship regardless of their relative contributions. Co-authorship rewards were potentially high, but the intent to merge standard for minting co-authors was low. Lesser contributors, with whom a work’s more significant authors may not have intended to collaborate,50 or whose contributions were quantitatively small in comparison to their co-author’s,51 were being granted co-authorship at the district court level, seeding frustration in the Second Circuit.

Beginning in the 1990s, courts heard a series of cases about creative works arising from joint efforts in which the disparities between the collaborators’ contributions were stark. Under the intent to merge statutory standard, they would nevertheless have been equal co-authors. Courts’ gut reaction to these cases was that equal co-authorship would be unfair.52

49. See H.R. Rep. No. 94-1476, at 120 (1976) (“Under the definition of section 101, a work is ‘joint’ if the authors collaborated with each other, or if each of the authors prepared his or her contribution with the knowledge and intention that it would be merged with the contributions of other authors as ‘inseparable or interdependent parts of a unitary whole.’”).

50. For instance, if an author creates a work from one of their own previous joint works, does the “intent to merge” from the previous work carry over into the putative derivative work, joining the earlier co-author automatically? See Weissmann v. Freeman, 684 F. Supp. 1248, 1261 (S.D.N.Y. 1988), aff’d in part, rev’d in part, 868 F.2d 1313 (2d Cir. 1989) (finding a joint work in this fact pattern, which was overturned on appeal by a divided Second Circuit panel).

51. See Fisher v. Klein, No. 86 CIV. 7187-CSH, 1984 U.S. Dist. LEXIS 15458, at *17–24 (S.D.N.Y. June 28, 1984);
Primary creators, it was perceived, would not want to share equal proceeds with collaborators who had made lesser contributions to the work; if forced by the law to do so, they would be disincentivized to collaborate out of fear of sharing authorship.

But equal co-authorship was well entrenched in the law. Modifying collaborators’ co-authorship shares to reflect their relative contributions was not an option under consideration. Instead, courts granted a prerogative to greater contributors to share, or not share, co-authorship with a work’s lesser contributors. This was given effect by adding a mutual intent to be co-authors requirement to the statutory intent to merge and necessarily independently copyrightable contributions. These cases proposed that evidence of the parties’ subjective intentions to be co-authors could be inferred from, for instance, how the work was billed or credited.

C. INTRODUCTION OF THE CONTROL DOCTRINE

While the intent to be co-authors test raised the bar for co-authorship, it did not foreclose it. A new requirement for co-authorship, a need to have

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53. This is the implication behind the observation in Childress, not further explained by the court, that the “equal sharing of rights should be reserved for relationships in which all participants fully intend to be joint authors.” Childress, 945 F.2d at 509. When one author is a “dominant author,” it is “especially important.” Id. at 508. Why? The unspoken assumption—unspoken because it seems unquestionable—is that a majority contributor would naturally not want to share equally with someone who made a much smaller contribution. To overcome this “common sense” view requires a strong showing to the contrary.

54. See Erickson v. Trinity Theatre, Inc., 13 F.3d 1061, 1069 (7th Cir. 1994).

55. Copyrightable works are “original works of authorship fixed in any tangible medium of expression.” 17 U.S.C. § 102(a) (2016). “[M]usical works, including any accompanying words,” are one category of works of authorship. Id. § 102(a)(2). A work may be fixed in a “copy or phonorecord.” Id. § 101. For a discussion of the originality requirement as it pertains to musical compositions, see infra notes 159–63. In joint works, an ongoing area of dispute is whether contributions need to satisfy a “non-de minimis” standard or should be independently copyrightable: these approaches are associated with Professors Melville and David Nimmer (the “Nimmer standard”), 1 NIMMER & NIMMER, supra note 30, §§ 6.07, at 6-20 to 6-21, and Paul Goldstein (the “Goldstein standard”), PAUL GOLDSTEIN & P. BRENT HUGENHOLTZ, INTERNATIONAL COPYRIGHT 248 (2d ed. 2010), respectively. Most circuits follow the latter standard.

56. Furthermore, it wasn’t until Thomson v. Larson, 147 F.3d 195, 202 (2d Cir. 1998) that the Childress analysis was held to apply to fact patterns in which lesser contributions were “major,” or of a type that would be independently copyrightable. This led to the “conundrum” of Thomson having made independently copyrightable contributions on a non-work-made-for-hire basis to a work of which she was not an author. Id. at 205. The pressing question (if Thomson was not a co-author of the work, could she then enjoin the Larson heirs from producing Rent with the lines she contributed?) was avoided by the court on procedural grounds and formed the basis of subsequent litigation. See Jesse McKinley, Family of ‘Rent’ Creator Settles Suit Over Authorship, N.Y. TIMES (Sept. 10, 1998), https://www.nytimes.com/1998/09/10/obituary/family-of-rent-creator-settles-suit-over-authorship.html [https://perma.cc/MV99-HPTA]. This issue appears never to have been resolved in the circuit. See Kwan v. Schlein, No. 05 CIV. 0459 (SHS) (JCF), 2009 WL 10678967, at *5 (S.D.N.Y. Apr. 23, 2009) ("While it seems clear that Ms. Kwan is not a co-author, it is possible that, if her contributions were great enough, she might own a copyright as sole author in the portions she wrote.").
control over the whole work, was invented. In the Seventh Circuit,\(^57\) it was framed as additional and necessary evidence of the mutual intent test for joint authorship. In the Ninth Circuit, it was framed as a new test of authorship, without which, as before, there could be no question of joint authorship—regardless of the extent of one’s copyrightable contribution.\(^58\) In *Aalmuhammed v. Lee,*\(^59\) appellant Jefri Aalmuhammed served (without a contract) as an Islamic consultant on the Warner Brothers film *Malcolm X.* In addition to these services, he made comparatively minor scriptwriting and directorial contributions that were included in the completed film. These contributions would have been independently copyrightable.\(^60\) All creative contributors intended that their contributions were to be merged into the whole,\(^61\) satisfying the statutory intent test. The panel voiced concern that dominant authors would be deterred from beneficial collaboration if they had to share the benefits of authorship with a co-author whose contributions were substantially less,\(^62\) strongly implying that on policy grounds they sought a construction of authorship that would exclude Aalmuhammed. As evidence against the existence of a mutual intent to be co-authors, the Ninth Circuit adopted the control concept introduced by the Seventh Circuit.\(^63\) Focusing on Spike Lee’s control over including Aalmuhammed’s contributions in the film,\(^64\) control was elevated as the most important factor needed to find there had been an intent to be co-authors.

Since *Aalmuhammed,* in the absence of a contract, lesser contributors’

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\(^57\) *Erickson,* 13 F.3d at 1064.

\(^58\) A common approach in this line of cases was for the court to dismiss lesser contributions as “suggestions.” *Erickson,* 13 F.3d at 1072; *Childress,* 945 F.2d at 509; see also *Thomson,* 147 F.3d at 206 (defendant brief refers to plaintiff’s independently copyrightable contributions as “suggestions”). “Suggestions” says nothing as to the copyrightability of those contributions; it makes their relevance turn on their relationship to the control factor. Later cases would arguably turn on “control,” often to the near-complete exclusion of copyrightability considerations.

\(^59\) *Aalmuhammed v. Lee,* 202 F.3d 1227 (9th Cir. 2000).

\(^60\) Id. at 1231.

\(^61\) Id.

\(^62\) Id. at 1235 (“Progress would be retarded rather than promoted, if an author could not consult with others and adopt their useful suggestions without sacrificing sole ownership of the work. Too open a definition of author would compel authors to insulate themselves and maintain ignorance of the contributions others might make.”). Referencing Childress’s description of the putative co-author’s contributions in that case as merely “some form of assistance,” *id.* (citing *Childress,* 945 F.2d at 504), the Aalmuhammed court envisioned a parade of horribles likely to follow if lesser contributors were granted co-authorship in joint works: “Claimjumping by research assistants, editors, and former spouses, lovers and friends would endanger authors who talked with people about what they were doing . . . .” *Aalmuhammed,* 202 F.3d at 1235–36. The work in the case at hand, Aalmuhammed’s work, fit into none of those suspect classifications. Here, the court is groping at a basis for a potential standard for when joint authorship is likely intended: note that the court appears to see the existence of a close relationship as indicative of a lack of co-authorship intent.

\(^63\) See id. at 1233 n.24.

\(^64\) Id. at 1235 (“Aalmuhammed did not at any time have superintendence of the work. Warner Brothers and Spike Lee controlled it.” (citation omitted)).
joint authorship claims have turned on evidence establishing that they exercised control. As the joint authorship test for the Ninth Circuit, it has been applied in songwriting joint authorship cases, more often than not, although the former was discouraged by the Aalmuhammed court in dicta. In practice, control has meant control over the whole work, though a minority position has found control over “separate and indispensable

65. Modern cases cite typically to Richlin v. Metro-Goldwyn-Mayer Pictures, Inc., 531 F.3d 962, 968 (9th Cir. 2008), which restated the Aalmuhammed factors as a concise test: First, we determine whether the “putative co-authors made objective manifestations of a shared intent to be co-authors.” A contract evidencing intent to be or not to be coauthors is dispositive. Second, we determine whether the alleged author superintended the work by exercising control. Control will often be the most important factor. Third, we analyze whether “the audience appeal of the work” can be attributed to both authors, and whether “the share of each in its success cannot be appraised.” Id. (citations omitted). In the absence of a contract, “control” or lack thereof is generally sufficient for determining co-authorship intent. To date, no case has turned on the “audience appeal” factor. For a comprehensive discussion of audience appeal’s role in joint authorship cases, see Timothy J. McFarlin, Shouting the People: Authorship and Audience in Copyright, 93 Tul. L. Rev. 443, 469–79 (2019).

66. In Ford v. Ray, 130 F. Supp. 3d 1358, 1363 (W.D. Wash. 2015), the putative co-author had allegedly contributed the beat that was the “basis for the song” and scratching for the chorus and solos. Applying Aalmuhammed, his claim was defeated because he lacked control over the whole composition, there were no objective manifestations of shared intent, and the court drew no conclusion on the audience appeal prong though he had allegedly contributed the beat that was the “basis for the song” and scratching for the chorus and solos. Id. at 1363–64. In addition to the plaintiff having waited too long to bring the claim, the court clearly did not countenance that a lesser contributor could fairly expect to be entitled to co-authorship status. Id. The court’s comments normatively take for granted that co-authorship for lesser co-authors is at the discretion of the dominant author, characterizing the plaintiff as “motivated by an unfair desire to cash in on the efforts of another.” Id. at 1368; see also Robertson v. Burdon, No. ED CV18-00397 JAK (SHxK), 2019 U.S. Dist. LEXIS 85468, at *19 (C.D. Cal. Apr. 3, 2019) (“The allegations . . . support the inference that [the plaintiff] and [the defendant] shared an intent that the songs would be written together.”).

67. In a case involving three putative co-songwriters, Taylor v. Universal Music Corp., No. CV 13-06412 RGK (AJWx), 2014 U.S. Dist. LEXIS 195775, at *8–10 (C.D. Cal. Mar. 10, 2014), the district court appeared to require (at most) a lessened Aalmuhammed standard for a joint authorship claim to survive a motion to strike. (The standard was applied in full to the related sound recording.) The court referenced dicta in Aalmuhammed, similarly present in Childress, that “traditional” forms of joint authorship, for instance involving the music and lyrics of a song, might not require a full Aalmuhammed inquiry. See id. at *4 (citing Aalmuhammed, 202 F.3d at 1232); cf. Childress, 945 F.2d at 508 (“[Whether the putative joint authors regarded themselves as joint authors] requires less exacting consideration in the context of traditional forms of collaboration, such as between the creators of the words and music of a song.”). This is the only case I have found in which a court operating under the control standard was willing to consider the dicta that the test should perhaps be less stringent when involving traditional forms of co-authorship.

68. See Aalmuhammed, 202 F.3d at 1232 (“It is also easy to apply the word ["author"] to two people who work together in a fairly traditional pen-and-ink way, like, perhaps, Gilbert and Sullivan . . . . But as the number of contributors grows and the work itself becomes less the product of one or two individuals who create it without much help, the word is harder to apply.”).

69. See id. at 1233 (“Burrow-Giles defines author as the person to whom the work owes its origin and who superintended the whole work, the ‘master mind.’ ” (citing Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53 (1884)); see also Moi v. Chihuly Studio, Inc., No. C17-0853RSJ, 2019 U.S. Dist. LEXIS 103576, at *9 (W.D. Wash. June 20, 2019); Beautiful Slides, Inc. v. Allen, No. 17-cv-01091-MMC, 2018 U.S. Dist. LEXIS 226907, at *8 (N.D. Cal. Sept. 7, 2018) (“[The defendant] contends she ‘had her roles for which she had nearly exclusive control’ . . . .”).
elements of the completed product” to meet the control requirement.\textsuperscript{70} More recently, there are also signs that the Aalmuhammed-like concept of control is resonating with other circuits and trumping creative contribution considerations.\textsuperscript{71} But the general consequence of the expanding influence of the control standard is that lesser contributors are blocked from the equal sharing of authorship, and lacking authorship, have no entitlements in the absence of a contract.\textsuperscript{72} In the two circuits most consequential for the copyright industries,\textsuperscript{73} there is now a trend toward finding works to be single-


\textsuperscript{71} In \textit{16 Casa Duse, LLC v. Merkin}, 791 F.3d 247, 252–53 (2d Cir. 2015), a director claimed joint authorship in a film in which the producer (as in Aalmuhammed) had failed to secure a work for hire agreement. The Second Circuit held that the “dispositive inquiry is which of the putative authors is the ‘dominant author,’ ” and cited the four Thomson factors—decisionmaking authority, billing or credit, agreements with third parties, and other evidence—in making the determination. \textit{Id.} at 260. But whereas in Thomson the dominant author was found to be the one who contributed the significant majority of independently copyrightable material, Casa Duse’s authorship was predicated on an Aalmuhammed-like control standard, in which authorship requires no independently copyrightable creative contribution: “Casa Duse initiated the project; acquired the rights to the screenplay; selected the cast, crew and director; controlled the production schedule; and coordinated (or attempted to coordinate) the film’s publicity and release.” \textit{Id.} The court held that these contributions represented greater control over the project than did the contributions of the director and therefore awarded sole authorship to the production company. \textit{Id.} at 261; \textit{see also} Anthony J. Casey & Andres Sawicki, \textit{The Problem of Creative Collaboration}, 58 WM. & MARY L. REV. 1793, 1835 (2017) (“The court created the fiction of a dominant author and then that label was bestowed on the party exercising the fewest acts of creative authorship. It had to do this to consolidate formal ownership and authorship . . . .” (citation omitted)).

In \textit{Corwin v. Quinones}, 858 F. Supp. 2d 903, 912 (N.D. Ohio 2012), the plaintiff band member’s contributions to sound recordings were denied joint authorship status due to lack of mutual intent with the defendant band leader, principally under the control standard: the defendant did not “cede[] control of the recordings to Plaintiff” and “made the final decision of what [was] used for the song.” As in Aalmuhammed, the language used by the court here presupposes a single author despite the undeniably collaborative nature of the work. Corwin cites principally to Erickson v. Trinity Theatre, Inc., 13 F.3d 1061 (7th Cir. 1994), but also to Janky v. Lake Cnty. Convention & Visitors Bureau, 576 F.3d 356 (7th Cir. 2009). In Janky, the Seventh Circuit found joint authorship in a case in which the putative co-songwriter likely did not make an independently copyrightable contribution, see Janky, 576 F.3d at 364 (Ripple, J., dissenting), partly on the theory that the co-author “wielded considerable control over what the song finally looked like,” \textit{Id.} at 362. \textit{(Janky followed the earlier Gaiman v. McFarlane, 360 F.3d 644 (7th Cir. 2004) in repudiating, at least in certain circumstances, the Seventh Circuit’s longstanding adherence to the Goldstein standard.)} Janky is, for now, the exception that tests the rule that the control standard is strictly a one-way ratchet for denying joint authorship claims. Its legacy across the circuits may be to serve as a means of granting authorship within the control framework to a party who has made no copyrightable contribution, and possibly no creative contribution at all.

\textsuperscript{72} On very rare occasions, as in Aalmuhammed itself, unrewarded creative contributors have been allowed to pursue recovery under unjust enrichment or similar theories, although rarely with success. \textit{See}, e.g., Ahn v. Midway Mfg. Co., 965 F. Supp. 1134, 1140 (N.D. Ill. 1997); Cabrera v. Teatro Del Sesenta, Inc., 914 F. Supp. 743, 769 (D.P.R. 1995). \textit{But see} Lopez v. Musinorte Ent. Corp., 434 F. App’x 696, 699 (9th Cir. 2011) (upholding a jury award in which one member of a five-member band had received one-fifth of the band’s profits and future royalties).

\textsuperscript{73} As discussed supra, influential rulings in joint authorship issue primarily from the Ninth and Second Circuits. The Ninth (32.38%) and Second (16.71%) are also the two circuits that produce the largest volume of copyright litigation. Christopher A. Cotropia & James Gibson, \textit{Copyright's
The intent to be co-authors test, which replaced the intent to merge test, and the control doctrine, itself designed to further strengthen the intent to be co-authors test, are widely regarded by scholars as suboptimal. Courts aspired to recognize the interests of both lesser and greater contributors, but existing law was understood to force an all-or-nothing choice between the two groups.\textsuperscript{74} The consequences of exclusion from co-authorship for lesser contributors include leaving them uncompensated for their work. Also of concern is the disordered effect of these standards on author identification, a central goal of copyright law. Goldstein criticizes the control standard as being “both overinclusive and under-inclusive.”\textsuperscript{75} It allows contributors primarily of non-copyrightable expression, such as film producers, to be recognized as authors. At the same time, it complicates the identification of the authors of most other multi-authored works.

\section*{D. Scholarly Positions}

Scholars generally agree that lesser contributors who make copyrightable contributions should be counted as co-authors.\textsuperscript{76} Beyond that,
scholars are divided into two camps with respect to how the law ought to treat them vis-à-vis their majority contributing co-authors.

One camp would retain the equal split default while granting equal shares to lesser co-authors. Goldstein would apply the plain language of the statute and allow equal ownership to all contributors of independently copyrightable material if they intended to merge their contributions in a unitary whole. If Warner Brothers does not want to share equal ownership in Malcolm X with Aalmuhammed, it should not fail to negotiate with him for the value of his services—and be more careful in the future. Goldstein levels similar criticisms of the extra-statutory introduction of the intent to be co-authors and control requirements to the Copyright Act’s intent language. While the statutory intent (intent to merge) approach “will sometimes give an economic interest to a contributor . . . who probably did not intend to receive it,” the Copyright Act should not be distorted to protect the economic interests of dominant contributors. A better outcome is for dominant contributors to bear the burden of adjusting shares via contract to avoid an undesired equal split.

The other camp of scholars focuses on courts’ unease with non-equal contributors receiving equal authorship rights as the source of courts’ statute-distorting jurisprudence. This camp would endorse lesser co-authors receiving a lesser split. The shared assumption of this camp—that if lesser

77. Professor Mary LaFrance offers this proposal: “Where [the] contribution is substantial as well as independently copyrightable, joint authorship should be presumed, and a party seeking to rebut that presumption would be required to show that the contribution in question was incorporated into the finished work under an express or implied derivative work license.” LaFrance, supra note 76, at 203.

78. Contra 1 NIMMER & NIMMER, supra note 30, § 6.08 (“If the only choice that the court faced was between making Aalmuhammed a half-owner or a non-owner of the resulting film, then that hard case would understandably force the bad law of the latter result.” (citation omitted)); Anthony J. Casey & Andres Sawicki, Copyright in Teams, 80 U. CHI. L. REV. 1683, 1721 (2014). Goldstein also offers a less radical compromise, consistent with the logic of Childress, suggesting that courts could find an implied transfer of copyright ownership on the basis of the nature of the relationship between the collaborators. GOLDSTEIN, supra note 9, § 4.2.1.1. The example given is the editor and author relationship: editors rarely expect to share joint authorship in the work they edit. Similarly, given the prevalence of work for hire agreements in the film industry, it could fairly be said that Aalmuhammed did not expect to be a joint author of Malcolm X. However, Aalmuhammed testified that he approached an executive producer seeking credit as a screenwriter and was told “there is nothing I can do for you,” but that they would discuss the matter in the future. Aalmuhammed v. Lee, 202 F.3d 1227, 1231 (9th Cir. 2000).

79. See GOLDSTEIN, supra note 9, § 4.2.1.1.

80. Id.


82. See, e.g., Mandel, supra note 76, at 353–57.
Contributors reap financial rewards greater than their contributions seem to merit, majority contributors will be disincentivized and creative production will suffer as a result—is rarely questioned. The inefficiency of equal pay is widely accepted. There is an assumption that fairness has an important role to play in economic productivity. But there is more to the psychology of linking compensation to contributions than simply motivating cool-headed, rational workers. The sentiment held by many is that a contribution-based default should be established because fairness requires a correspondence between inputs and outputs.

There are two main approaches, which hold in common that it is possible to make adjustments to existing joint authorship law. The proposed implementation which has attracted the most scholarly support is a rebuttable presumption of equality. This may be because it receives textual support in the legislative history and is drawn from the analogy of joint authorship with real property tenancy in common. In such cases, while

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83. Paying high- and low-performing workers the same leads high performers to lower their efforts. Jason D. Shaw, Pay Dispersion, 1 ANN. REV. ORG. PSYCH. & ORG. BEHAV. 521 (2014).

84. Perhaps intuitions are less strict than absolute proportionality, but they would at least require that the individual who contributed the most received the most; the individual who contributed the second most, the second most; and so on; that fairness requires a rank order between inputs and outputs.

85. Aristotle, who noted that “in acts of justice what is equal in the primary sense is that which is in proportion to merit, while quantitative equality is secondary,” was an early proponent of this construction of fairness. ARISTOTLE, THE NICOMACHEAN ETHICS 151 (David Ross trans., Oxford World’s Classics ed. 2009). This dynamic between inputs and outputs is referred to as “equity” in justice studies; in sociology it has been called the “principle of differentiation”; in organizational behavior, “pay dispersion.” The boundaries of the concept shift only slightly across disciplines. See Morton Deutsch, Equity, Equality, and Need: What Determines Which Value Will Be Used as the Basis of Distributive Justice?, 31 J. SOC. ISSUES 137, 143 (1975); Jennifer L. Hochschild, What’s Fair: American Beliefs About Distributive Justice 111 (1986); Shaw, supra note 83.

86. Other scholars propose alternate regimes that allow for proportional recovery. See Bell & Parchamovsky, supra note 76 (proposing a “copyright trust” that would allow for one controller of the work while contributors divided profits in proportion); Casey & Sawicki, supra note 78, at 1725 (separate authorship from ownership and grant ownership to the joint work’s “team manager”); Rochelle Cooper Dreyfuss, Commodifying Collaborative Research, in THE COMMODIFICATION OF INFORMATION 397, 412 (Niva Elkin-Koren & Neil W. Netanel eds., 2002) (allow proportionality via “collaborative work[s]” that are not work for hire but fail the joint authorship test); Russ VerSteeg, Intent, Originality, Creativity and Joint Authorship, 68 BROOK. L. REV. 123, 179 (2002) (allow proportional recovery in quantum meruit if joint authorship is objectively unreasonable).


88. “Under the bill, as under the present law, coowners of a copyright would be treated generally as tenants in common, with each coowner having an independent right to use or license the use of a work, subject to a duty of accounting to the other coowners for any profits.” H.R. REP. No. 94-1476, at 121 (1976).
undivided equal shares are the default, co-owners may rebut that presumption by showing that unequal contributions had been made to the purchase price. This would allow unequal shares to be awarded if there is evidence the co-authors’ contributions were unequal. Aalmuhammed’s contributions to Malcolm X could be determined by experts to have been responsible for some small fraction of the film’s success, and he could be compensated accordingly. 89 A smaller group of scholars, perhaps relying on the silence of the Copyright Act as to shares in the copyrighted work, argue that proportionality should be the default rule in all joint authorship cases. For these scholars, fairness, as they believe it to be perceived, is a paramount concern. If songwriters prefer to split equally even when a co-author makes a lesser contribution, it would be a challenge to this notion of fairness.

II. WHAT SHOULD BE DONE?

How should we choose whether to reject the intent to be co-authors and control doctrines and instead include lesser contributors as co-authors? And if we do decide to include lesser contributors as co-authors, what would be the most efficient rule for splitting revenue between joint authors: retaining the equal split, or revising it to be contributions-based? With respect to the first issue to be decided, it is possible, if unlikely, that most creators would prefer lesser creators to be excluded from co-authorship and simply paid for their services. Often in collaboration situations where the parties do not have a contract or the contract is silent about co-authorship shares, which is when the default joint authorship rules apply, a main creator will not have funds to pay lesser contributors in advance for services, and the unevenness of contributions may not be clear until the joint work is complete.

With respect to the second question, some would argue that well-established common law default rules are presumptively efficient 90 because they have been accepted by parties across contexts over time. 91 The control doctrine did not arise to thwart the equal split rule for nearly a century. 92 On

89. What is often left unexplained with these proposals is whether lesser contributors would only be entitled to royalties in proportion to their contribution, or whether they would have full authorial rights, such as the right to license the work on a nonexclusive basis.

90. See Richard A. Hillman, The Richness of Contract Law 225 (1997) (noting the standard view that the rule most parties would want is synonymous with the efficient rule).

91. See Alan Schwartz & Robert E. Scott, The Common Law of Contract and the Default Rule Project, 102 Va. L. Rev. 1523, 1585–86 (2016) (“[E]nduring common law rules have to be transcontextual; that is, they must be satisfactory to parties over broad sections of the economy. . . . [F]ew rules can satisfy the structural requirement that they are (almost) everywhere applicable just because commercial parties (almost) everywhere like them.”).

92. The tenure of the equal split rule is comparably long to the cohort of common law contract default rules argued to have stood the test of time as trans-contextually acceptable to parties and therefore efficient. See id. at 1535. It has similarly satisfied the criteria of having been applied and accepted in different industry contexts. See, e.g., Greene v. Ablon, 794 F.3d 133 (1st Cir. 2015) (scholarship);
the other hand, the equal split rule’s detractors regard as self-evident that it is unfair and unpopular. The suboptimality of the equal split default feels like a frictionless assumption. Proportional compensation is the norm in wage labor contexts, which are related but distinct.93

The traditional view is that an efficient default reflects the preferences of “most contracting parties—or perhaps most contracting parties in a given industry.”94 The universe of possible contracting parties in this case is those creative collaborators who would potentially contract with one another over the division of license proceeds. This universe consists principally of co-songwriters. The core copyright industries include literature, music, theater, film, the media, photography, software, visual arts, and advertising.95 Collaborative creative production has been on the rise across all of the core copyright industries, but it nevertheless accounts for a very small proportion of output (<0.5%) in most of the visual arts96 (for example,


93. Shaw notes: “Moreover, theories purportedly supporting the benefits of pay compression do not, in a general sense, advocate equal pay for unequal work . . . . [E]ven Pfeffer’s (1998) simplified practitioner-oriented treatment, which advocates pay compression as a best practice, also extols individual pay-for-performance as something organizations should universally adopt.” Shaw, supra note 83, at 534 (citing JEFFREY PFEFFER, COMPETITIVE ADVANTAGE THROUGH PEOPLE: UNLEASHING THE POWER OF THE WORK FORCE (1994)). It is not clear what inputs are, but they are somehow quantitative and contextually determined. Often there is an assumption that focal inputs should be those antecedents with a more direct link to outcomes. See Robert Folger, Rethinking Equity Theory, in JUSTICE IN SOCIAL RELATIONS 145 (Hans Werner Bierhoff, Ronald L. Cohen & Jerald Greenberg eds., 1986).


95. The World Intellectual Property Organization (“WIPO”) identifies the core copyright industries as those “wholly engaged in the creation, production and manufacture, performance, broadcasting, communication and exhibition, or distribution and sale of works and other protected subject matter.” WORLD INTELL. PROP. ORG., GUIDE ON SURVEYING THE ECONOMIC CONTRIBUTION OF THE COPYRIGHT INDUSTRIES 51 (2015), https://www.wipo.int/edocs/pubdocs/en/copyright/893/wipo_pub_893.pdf [https://perma.cc/E8AD-9Q7]. These include literature, music, theatre, film, the media, photography, software, visual arts, advertising services, and collective management societies. Id. at 52–53.

fine art, sculpture, and photography). The rate is higher, albeit still very low, in literature and theater. In music, however, the co-authorship rate of songs is 37%. Copyright works are much more likely to be produced through collaboration in the film, software, and music industries, and in academia. However, in all but the music industry, the joint authorship default rules are for the most part inapplicable.

There are two reasons for this. First of all, only authors can be joint authors. This means that whenever collaborators’ works are officially “authored” by their employer, the default rules are not relevant. Work for hire arrangements are not generally practiced in the music industry,
but they are the norm in film and software. (The stakes for Warner Brothers in Aalmuhammed illustrate why.) Second, in academia, journal articles, which comprise the bulk of academic publishing, as a matter of course reassign royalty streams from creators to publishers. The open access movement opposes assigning copyrights to paywalling publishers, but even under an open access model the publishing royalties would still be inconsequential for authors, albeit for a different reason. These practices—work for hire and publisher assignments—cover two paths to corporate ownership of copyrightable work and most contexts of creation in film, the media, software, and advertising.

A. THE UNIQUE RELEVANCE OF CO-SONGWRITING

Songwriting is not included in the categories of creative work covered by work for hire. Typically, musicians who are signed by record labels will be paid an advance against future royalties. However, in those cases, this is not an assignment of ownership of their songwriting copyrights to the labels. So co-songwriters, as a matter of course, will be either contracting

Sound recordings have been held not to fall under the “audiovisual work” label. Luliroma Ltd. v. Axcess Broad. Servs., Inc., 128 F.3d 872, 878 (5th Cir. 1997). Works made for hire are otherwise confined strictly to the categories of work enumerated in section 101. See Cmty. for Creative Non-Violence v. Reid, 490 U.S. 730, 748 (1989). Even when music is composed as a work made for hire, royalties are distributed to the actual author per ASCAP rules. Robert Brauneis, Copyright and the World’s Most Popular Song, 56 J. COPYRIGHT SOC’Y U.S.A. 335, 411 (2009).

108. See NIMMER & NIMMER, supra note 30, § 6.05 n.19 (“The reality is that contracts and the work-made-for-hire doctrine govern much of the big-budget Hollywood performance and production world.” (quoting Garcia v. Google, Inc., 786 F.3d 733, 743 (9th Cir. 2015)).

109. Academic journal revenue is roughly three times larger than that of academic book publication. See JOHNSON ET AL., supra note 104, at 22. Over 3 million science, technology, and medicine (“STM”) scholarly articles are published per year. Id. at 5.


112. See NIMMER & NIMMER, supra note 30, § 6.05 n.19 (“The reality is that contracts and the work-made-for-hire doctrine govern much of the big-budget Hollywood performance and production world.” (quoting Garcia v. Google, Inc., 786 F.3d 733, 743 (9th Cir. 2015))).


114. These are often structured as funds, which combine the recording budget with advances against royalties in a lump sum, but traditional advances are still utilized. See DONALD S. PASSMAN, ALL YOU NEED TO KNOW ABOUT THE MUSIC BUSINESS 111 (9th ed. 2015). In exchange, most artists transfer the copyrights to their recordings (“the masters”) to the label. See id. at 211.

115. Songwriters often sign away a portion of their songwriting copyrights to publishers through co-publishing agreements. See id. at 235; Jill A. Michael, Music Copublishing and the Mysterious ‘Writer’s Share,’ 20 ENT. & SPORTS L. 13, 14 (2002). Record labels may also take a portion of the songwriting copyright, or the proceeds thereof, as part of a “360 deal.” See Edward Pierson, Negotiating a 360 Deal: Considerations on the Promises and Perils of a New Music Business Model, 27 ENT. & SPORTS L. 1, 34 (2010).
out of, or relying on the default rules for, joint authorship to specify the allocation of songwriting royalties.

Songwriting is one of the copyright domains in which the parties are the least likely to be thinking in legalities at the time of creation, or even in terms of industry norms: songwriters have only limited knowledge of other songwriters’ split practices. Unlike scholarship, commercial filmmaking, or software development, songwriting can be (and often is) undertaken by a handful of teenagers in a garage band for whom default rules in the absence of contract are particularly relevant. Moreover, 68% of music groups are primarily composed of friends or family members. Other domains where joint authorship rules tend to apply do not approach the volume of creation—and therefore individual works which are potentially subject to contracting about royalty splits—of co-songwriting. There are over 750,000 people who have co-written a song in the ASCAP repertory alone.

Finally, joint authorship rules are financially consequential for co-songwriters. The economic importance of songwriting royalties is not an argument in favor of focusing on co-songwriters to set the default joint authorship rules. But it is an additional reason why we should be interested in efficiently setting the joint authorship rules more generally. In the history of popular music, the importance of songwriting royalties to musicians has waxed and waned. Songwriting royalties became meaningful for musicians after the 1960s transition to solo artists and bands who wrote their own songs and who, by the 1970s, had the bargaining power to control

116. Theater is probably the closest analogue. Like songwriting, it has been the domain of several landmark joint authorship cases, discussed supra. See Thomson v. Larson, 147 F.3d 195 (2d Cir. 1998); Erickson v. Trinity Theater, Inc., 13 F.3d 1061 (7th Cir. 1994); Childress v. Taylor, 945 F.2d 500 (2d Cir. 1991).
117. Polecz, supra note 7, at 38.
118. ACE Repertory Search, ASCAP, https://www.ascap.com/repertory [https://perma.cc/8A8F-QB3W] [hereinafter ASCAP Repertory]. The downloadable version in CSV format (current as of Mar. 26, 2020) was used.
119. See Justin Hughes & Robert P. Merges, Copyright and Distributive Justice, 92 NOTRE DAME L. REV. 513, 532 (2016) (“[E]ven in the music industry—and with access to very little empirical data—we can see the powerful role that copyright plays in securing incomes for creative individuals.”) Justin Hughes and Robert Merges also note the importance of the copyright system in advancing African-American prosperity at a time when the failure of other systems to do so is being increasingly, if belatedly, recognized. See id. at 551–55.
120. See id. at 532–33 (making as a “low-ball estimate,” PROs collected at least $4.1 billion in public performance royalties for songwriters in the 2010 to 2014 period).
121. In 1978, the Copyright Act revised the mechanical royalty rate, which had remained unchanged since the Copyright Act of 1909 set it at 2 cents per song. Royalties started at 2.75 cents per song, and have increased to 9.1 cents per song today. U.S. COPYRIGHT OFF., MECHANICAL LICENSE ROYALTY RATES, https://www.copyright.gov/licensing/m200a.pdf [https://perma.cc/PLY6-755N].
122. American popular music of the pre-rock era was largely written by professional songwriters, rather than songwriter-performers. See generally RUSSELL SANJEC, AMERICAN POPULAR MUSIC AND ITS BUSINESS: THE FIRST FOUR HUNDRED YEARS (1988).
their own publishing revenues. Beginning in the band era of the 1960s, songwriting royalties for the most successful songs were worth millions. The revenue for artists derived from songwriting has declined again with the advent of streaming. Nevertheless, songwriting royalties are a significant portion of total income for many successful musicians. This became particularly clear during the COVID pandemic which eliminated touring income for over a year for many artists. A survey prior to the COVID pandemic of working musicians found that, in the most recent decade, indie rock bands have earned about 21% of their gross income from songwriting royalties and advances on those royalties. Across other genres this figure was approximately 8% of income, rising to 39% for people who identified as composers, whether performing or not. And songwriting royalties often provide a measure of financial security for musicians. Unlike money from tours, for instance, the checks keep coming in once a musician’s most active

123. See id. at 537–39.
124. See id. at 473.
125. Royalties generally, and songwriting royalties in particular, took a significant hit from the rise of streaming music, legal and otherwise. Streaming as a whole has undercut physical music sales. See JOHN SEABROOK, THE SONG MACHINE: INSIDE THE HIT FACTORY 187 (2015). Even legal streaming services like Spotify can offer little benefit to songwriters. Id. at 188 (“On most streaming services . . . the owners of the recording get most of the performance royalty money, while the owners of the publishing get only a fraction of it.”); JASON B. BAZINET, MARK MAY, KOTA EZAWA, THOMAS A. SINGLEHURST, JIM SUVA, ALICIA YAP, JENNIFER BREITHAUPT, KEVIN BROWN & BJORN NICLAS, PUTTING THE BAND BACK TOGETHER: REMASTERING THE WORLD OF MUSIC 74 (2018), https://www.citivelocity.com/citigps/music-industry/ [https://perma.cc/HAG2-STR9] (“[I]f you are a fully independent artist, you are likely to earn around $15,000-$20,000 per million plays on a streaming service and that gets split between the writers . . . ![IF] you are on an ‘old industry’ label, you can expect to only get $1,700 per million plays, because the label is taking the lion’s share . . . ”). Labels feeling the pinch from declining physical sales have also increasingly turned to “360 deals,” whereby artists are obliged to surrender percentages of other revenue streams (like songwriting) in order to land a recording contract. See PASSMAN, supra note 114, at 102–03; Lee Marshall, The 360 Deal and the New Music Industry, 16 EUR. J. CULTURAL STUD. 77 (2012). Increasing royalties from digital streaming may indicate that the importance of this revenue stream will only increase in the future. See Ed Christman, NMPA Claims Victory: CRB Raises Payout Rate from Music Subscription Services, BILLBOARD (Jan. 27, 2018), https://www.billboard.com/articles/news/8096590/copyright-royalty-board-crb-nmpa-spotify-apple-music-streaming-services [https://perma.cc/YC99-TWH5]; U.S. Sales Database, RIAA, https://www.riaa.com/u-s-sales-database/ [https://perma.cc/G2H-ZMJJ] (showing a reversal in recorded music revenue decline due to the growth of monetized streaming).
127. The survey found that “[m]usicians in rock, pop, country, folk and all other genres [other than classical or jazz] earn 8% of their revenue from compositions.” DiCola, supra note 126, at 329.
128. Self-identified composers, including both performers and non-performers, earned 39%. Id.
career years are over. Songwriters can also receive substantial payouts for licensing their compositions for film, TV, commercials, or video games. Fees for licensing a song for television play can be as low as $1,000 per year to more than $100,000 per year for well-known hits.

If you combine the considerations of (1) collaborations not covered by employment, work for hire, and where there is no standard practice of assignment of copyright, with (2) the volume of collaborations and works produced, there is a strong case to be made that default joint authorship rules are primarily relevant for co-songwriting. It may be that by volume, default joint authorship rules that are efficient for co-songwriting are efficient for most co-authorship cases to which those rules apply in general.

If fairness in labor contexts means applying the proportionality principle, we would expect musicians to find the equal split default rule unfair. But there is no evidence suggesting that songwriters tend to take issue with Judge Hand’s view that they must “share alike.” There has been no movement against it. Proposed amendments to the Copyright Act have never sought to revise the equal split rule, nor have music industry representatives testifying before Congress problematized it. This suggests that the equal split rule has persisted not merely because it is precedent, but because either very little is at stake, or because it leads to what collaborators consider a fair result.

B. IDENTIFYING EFFICIENT JOINT AUTHORSHIP RULES IS AN EMPIRICAL TASK

If one agrees with the prevailing view that an efficient default reflects the preferences of most contracting parties, then determining the most

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129. See, e.g., Dean Goodman, Songwriter “Dirty Dancing” All The Way to the Bank, REUTERS (Nov. 10, 2010), https://www.reuters.com/article/uk-dirtydancing/songwriter-dirty-dancing-all-the-way-to-the-bank-idUKRE6A84J220101110 [https://perma.cc/T3B8-MUP5] (“Previte estimates that he gets quarterly checks of $10,000 to $30,000 for radio airplay, additional quarterly checks of $50,000 to $100,000 from the hit stage adaptation, and annual checks of $100,000-$125,000 when ‘(I’ve Had) The Time of My Life’ is used in commercials.”); J.J. Cale: A Veteran Songwriter’s ‘Old Man’ Music, NPR (Feb. 25, 2009), https://www.npr.org/2009/02/25/101148876/a-veteran-songwriters-old-man-music [https://perma.cc/S9HM-STKD] (“Those royalty checks keep coming in, so Cale doesn’t have to tour or record much.”).

130. Synchronization fees vary based on the media, how the song is used, how much of the song is used, and the status of the songwriter. PASSMAN, supra note 114, at 265–66. Typical fees for using songs in television shows can range from $10,000 to $50,000 or more, depending on the previous popularity of the song and how prominently it features. Id. at 269. These fees will scale if, for example, the song is licensed for less or more than a year. If the master is being used in addition to the song, a master use license is also required; this is typically equal in cost to the synchronization fee. Id. at 265.

131. For instance, if an artist accepts a low-ball offer in exchange for audience exposure. Id. at 269.

132. Id. at 270.

133. There is also the view that the most efficient default rule for a given fact pattern may not be a
appropriate default relies on identifying the preferences of those parties. This can be achieved by looking at what contracting terms those individuals actually agree to, an empirical question. Moreover, in the case of co-songwriting, this is answerable. Unlike many questions governed by

“majoritarian” default, but rather a “penalty” default: a default that most contracting parties would not prefer. See, e.g., Ian Ayres & Robert Gertner, Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules, 99 YALE L.J. 87, 91 (1989) (explaining that penalty defaults are intended to serve a twofold information-forcing purpose: to force one party to reveal to another information that, if concealed, could increase their private gain on the contract at the expense of the total gain; and to force parties to reveal information to courts when it would be less efficient for courts themselves to discover it.) The equal split default was clearly not intended as a penalty default: it was derived from the equal split rule in tenancy in common, which was itself not intended as a penalty default. Judge Hand’s (and subsequent courts’) reasoning does not support such a reading. Judge Hand disagreed with courts dividing joint authorship shares other than equally, not because he thought it would impose a fact-finding burden on the court that would be better placed on the parties, or because he identified an asymmetry of information or market power between the parties, but because he regarded it (correctly or not) as philosophically impossible. Maurel v. Smith, 220 F. 195, 200 (S.D.N.Y. 1915). Could the equal split default function as a penalty default? Assuming majority or plurality contributors do not want to split equally, it would serve as a penalty default to them. But majoritarian defaults are penalty defaults to those not in the numerical majority; in most arrangements, the lesser contributors would be the more numerous beneficiaries. Furthermore, the only relevant information that might be withheld is the existence of the default itself; there is no reason to suppose that majority contributors, as a rule, would be the more legally well-informed parties. (Well-informed lesser contributors would be incentivized to strategically withhold information.) Also, while a proportional default would indeed impose additional fact-finding on courts, creative labor is particularly ill-suited to ex ante bargaining. Any efficiency gain likely to arise from compelling authors to quantify their contributions in advance would therefore be small, and might actually hinder creative production. This consideration may inform, at least in part, the lack of equal split defaults in non-American jurisdictions. See infra notes 142–44.

134. See, e.g., Richard A. Epstein, In Defense of the Contract at Will, 51 U. CHI. L. REV. 947, 951 (1984) (selecting a rule “because it reflects the dominant practice in a given class of cases and because that practice is itself regarded as making good sense for the standard transactions it governs”); Stewart J. Schwab, Collective Bargaining and the Coase Theorem, 72 CORNELL L. REV. 245, 286 (1987) (looking to “actual contracts” to determine “which party values the entitlement most highly”); J. Hout Verkerke, An Empirical Perspective on Indefinite Term Employment Contracts: Resolving the Just Cause Debate, 1995 WIS. L. REV. 837, 842 (1995) (using contract data to find support for a default rule in “[t]he revealed preferences of market participants”). An objection to modeling default rules on actual contracting behaviors is that, where a well-developed default rule already exists, the universe of contracting decisions is distorted by the existence of the default rule. Cf. Jacob Goldin & Daniel Reck, Revealed-Preference Analysis with Framing Effects, 128 J. POL. ECON. 2759, 2760 (2020) (describing default rules as a type of framing effect); Cass R. Sunstein, Switching the Default Rule, 77 N.Y.U. L. REV. 106 (2002) (discussing default rules and the endowment effect). Parties who find the default objectionable will explicitly contract out of it, while those who find it acceptable will leave a gap. See Ayres & Gertner, supra note 133, at 115–16. However, even among its detractors, this market-mimicking approach has been considered desirable in circumstances similar to those surrounding artistic creation in general and songwriting co-authorship in particular—for example, where parties are unaware of the default or lack a contract entirely, as the distorting effect would not be present. See id. at 115 n.122. Additionally, a large majority (75%) of bands maintain their split preferences over the lifetime of the band. See infra Section III.B.1.

135. The royalty splitting directions that co-songwriters provide to performance rights organizations (“PROs”) may or may not be backed up by a written contract. PRO registration is not a contract between co-authors, and only needs to be signed by one of a song’s co-authors or their legal agents. I argue that looking at actual allocating behavior is an effective proxy for looking at actual contracting behavior. For this reason, while presumptively all split directives will have incurred negotiating transaction costs, they may or may not also have incurred contracting transaction costs.
default terms in contract law which may have a remote chance of becoming operational, if a song earns any songwriting royalties that the co-songwriters want to collect, they will have to face the question of with whom and how to divide them up.

Co-songwriters create a record of who shares co-authorship of their joint work when they register a song with a performance rights organization (“PRO”). The individuals completing a PRO’s registration form must specify how royalties are to be split between those credited as writers: there is no default split as far as the PROs are concerned. PROs then channel the royalties they collect to a song’s listed co-writers in accordance with that information. The major PRO repertories are public and include nearly the full set of co-authorship crediting decisions made by co-songwriters in the United States.

I am interested in the co-authorship crediting decisions and royalty split choices of collaborations where contributions are uneven. Ideally, I could identify all songs resulting from uneven contributions and see if all contributors, including lesser contributors, are typically credited as co-authors. That information is not attainable. However, in this Article I construct a unique database including songwriting contribution levels for over 1,000 music groups with certified Gold Records—every band with a Gold Record that primarily writes its own songs, from the first certifications to the time of writing (1959–2021) (the “Gold Record bands”). The songwriting process of each band in the Gold Record database is coded for the contribution levels of its band members based on publicly available information.

Because the membership of these most popular bands is well-known, we can determine by looking at their PRO-registered songwriting credits whether lesser contributors are most often counted as co-authors. PRO credits were obtained for bands in the Gold Record database from the song repertories of the American Society of Composers, Authors and Publishers (“ASCAP”) and Broadcast Music, Inc. (“BMI”), which together represent 90% of the U.S. market in public performance rights (Study 1).

If the answer to whether lesser contributors are counted as co-authors is

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136. Registration forms must indicate the identities of the writers, their publishers and their respective royalty shares. See Work Registration Form, Broadcast Music, Inc., https://www.bmi.com/pdfs/work-reg-e.pdf [https://perma.cc/J6H9-CTST]. As registrations must be signed only “by an affiliated writer or an authorized representative of the submitting publisher,” they do not function as contracts between putative co-authors. Id. Similarly, split sheets—internal documents indicating the relative ownership shares of songwriting contributors—have been held not to provide “conclusive evidence of copyright ownership or authorship,” although they have evidentiary value in determining the validity of such a claim. See Montalvo v. LT’s Benjamin Records, Inc., No. CV 12-1568 (GAG), 2015 WL 13815393, at *5 (D.P.R. May 8, 2015).
“no,” then the consequence of the control doctrine that lesser contributors are excluded from co-authorship status will have been shown to align with creator preferences in this case. This would weaken at least one key objection to the control doctrine (see Figure 1).

If the answer is “yes,” for which I make the case, the next question is whether, as co-authors, lesser contributors typically share equally in the benefits of co-authorship. For this Article, I conducted two studies to investigate this question (Study 2a and Study 2b). In Study 2a, I estimated the royalty splits of a third of the uneven Gold Record bands which include all members as co-authors. First, I compiled statements by the bands themselves or those close to them (managers, for example) disclosing the bands’ royalty split practices. The second method used the repertories of ASCAP and BMI to infer the splits of Gold Record bands. In Study 2b, I used this same methodology to infer the splits of 1.2 million co-written songs.

If the results of Study 2 support that “yes,” typically lesser contributing co-authors do receive an equal split of royalties, then the existing equal split rule is presumptively the most efficient default.

If the analysis in Study 2 suggests that “no,” lesser contributing co-authors typically do not receive an equal split of royalties, then the proposals of the second camp of scholars for revisiting the equal split default ought to be debated further.

137. The economic benefits of co-authorship involve the authors’ ability to profit from the copyright on either an exclusive (sale) or nonexclusive (license) basis. Exclusive transfers require the consent of all owners of the copyright; nonexclusive transfers can be executed by any single owner. While the practice of songwriters selling their catalogue is not unknown, the primary means by which they derive economic benefits from their work is through licensing.
FIGURE 1. What Is Creators’ Preferred Treatment of Lesser Contributors?

Are lesser contributors counted as coauthors? (Study 1)

No

Policy implication: None

Yes

Policy implication: Drop "control" doctrine

Do lesser contributing coauthors receive an equal split of royalties? (Study 2)

No

Policy implication: Proportional split

Yes

Policy implication: Keep equal split default
C. RELEVANCE OF EMPIRICAL DATA

Can the transaction cost implications of these studies help guide us between an equal split and proportional split rule? Even if the results of Study 2 suggest that we should retain the equal split default, some might question if there is any added value to empirical preference data over and above existing transaction cost arguments in favor of the equal split. Even if preference data were to show that creators prefer a proportional split, the argument might go: an equal split default would still be most efficient because the transaction costs of a proportional split default are too high. I argue that it seems unlikely that the transaction costs of implementing a proportional default split are as high as some contend. The thought is that a contribution-based rule would entail a considerable fact-finding burden and require jurists to assign percentages based on their subjective appraisals of each co-author’s contributions. Unlike in copyright infringement cases, where courts already make such appraisals, in joint authorship disputes the value of a work is not necessarily known. This position rests on evidentiary assumptions that are not compelling. Assigning joint authors uneven shares in a song involves approximate and imprecise appraisals.

Yet those aspects of making proportional attributions would not be unique. Courts are accustomed to carving up responsibility in contexts of nebulous causality to arrive at liability determinations in common law. English courts have awarded proportional shares in cases where authorship was found in the absence of contract and contributions were


139. Under one approach to the prevailing substantial similarity standard, finders of fact must “break[] the works ‘down into their constituent elements, and compa[re] those elements for proof of copying.’ ” Swirsky v. Carey, 376 F.3d 841, 845 (9th Cir. 2004) (quoting Rice v. Fox Broad. Co., 148 F.Supp.2d 1029, 1051 (C.D. Cal. 2001)) (describing the extrinsic test), and determine “whether the ordinary reasonable person would find ‘the total concept and feel of the works’ to be substantially similar,” Pasillas v. McDonald’s Corp., 927 F.2d 440, 442 (9th Cir. 1991) (quoting Data East USA, Inc. v. Epyx, Inc., 862 F.2d 204, 208 (9th Cir. 1988)) (describing the intrinsic test). Therefore, in an infringement action, the finder of fact continually makes percentage assignments both formal and informal. See, e.g., Copeland v. Bieber, 789 F.3d 484, 494 (4th Cir. 2015) (discussing the relative importance of the chorus in pop); Newton v. Diamond, 388 F.3d 1189, 1196 (9th Cir. 2004) (no infringement where the sampled portion “is roughly two percent of the four-and-a-half-minute ‘Choir’ sound recording”); Three Boys Music Corp. v. Bolton, 212 F.3d 477, 487 (9th Cir. 2000) (“The jury found that 28% of the album’s profits derived from the song, and that 66% of the song’s profits resulted from infringing elements.”), overruled by Skidmore v. Led Zeppelin, 952 F.3d 1051 (9th Cir. 2020); cf. 17 U.S.C. § 107(3) (fair use determined in part by “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.”).

140. See McFarlin, supra note 65, at 490–91.

unequal, and ownership is proportional by default in Germany. If there are reasons to think American jurists would face unique obstacles to determining proportional ownership shares, they have yet to be raised. In general, while degrees of interdependence vary across collaborative contexts, almost as a rule people succeed in translating comparative contributions into pay differences within a tolerated margin of error. If most collaborators must contract out of the default regime because an equal split does not match their royalty distribution preferences, then on the whole a proportional split default rule could be more efficient. The pre-existing arguments against the proportional split and in favor of the equal split are weak. These arguments do not fare well if you believe the central preference contention of the advocates of a contributions-based split. The aggregate transaction costs of contracting out of the default rule are the most significant potential drag on efficiency. For this reason, it is important to know both if creators—in this article particularly songwriters—think lesser contributors deserve to be co-authors, and as co-authors, how much they think they deserve.

III. WHO IS A CO-AUTHOR?

A. STUDY 1: ARE LESSER CONTRIBUTORS CONSIDERED CO-AUTHORS?

1. Methodology

When songwriters collaborate to write a song, but one of them contributes more than the other, will they all still be credited as co-authors? To answer this question, I focused on a large group of songwriting collaborators: music groups that write their own songs and have one or more Gold Records. As popular music groups, they are often on record about which of their members contribute to writing their songs and how much of a

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142. See Fisher v. Brooker, [2006] EWHC (Ch) 3239 (Eng.) (awarding a 40% share to a co-author of a copyrighted song, although Fisher had argued for a 50% share); Bamgboye v. Reed [2002] EWHC (QB) 2922 (Eng.) (awarding a one-third share).

143. Gesetz über das Urheberrecht und verwandte Schutzrechte (Urheberrechtsgesetz [UrhG]) [Act on Copyright and Related Rights], Sep. 9, 1965, as amended, Art. 8(3) (Ger.), https://www.gesetze-im-internet.de/englisch_urng/englisch_urng.html [https://perma.cc/M33C-5Q42] (“Proceeds derived from the use of the work are due to the joint authors in accordance with the extent of their involvement in the creation of the work, unless otherwise agreed between the joint authors.”).

144. Another efficiency-based argument in favor of the existing equal split rule is that a proportional split rule would increase how often joint authorship is litigated, because co-authors would self-servingly bring claims arguing they are entitled to larger shares than their co-authors will acknowledge. However, this seems unlikely. See Mandel, supra note 76, at 356. (“Equitable apportionment would reduce the stakes of expected outcomes from litigation, which would be expected both to reduce litigation and to increase the rate of settlement of any litigation that is initiated.”).
contribution those members make to writing their songs. The 1,003 bands in this study include Gold Record awardees from across the full sixty years (1959–2021) during which Gold Records have been awarded by the Recording Industry Association of America (“RIAA”). The RIAA certifies albums and singles based on sales.

The Gold Record bands have previously discussed their songwriting processes in numerous interviews. Such interviews were the principal basis for identifying bands in which all the members contribute to songwriting but do not contribute evenly (uneven contributions bands).  

145. Importantly, they are a non-arbitrarily defined set of music groups. Descriptions of the co-songwriting processes for songs by Gold Record bands are broadly similar to those of co-songwriting by less successful bands and in non-band collaborations; on this basis, comparable shares of songs written through even less uneven co-contribution bands and co-songwriting more generally. Sufficient information was found to code 96.16% of all Gold Record bands that primarily release songs written by band members. The percentage of results excluded for missing data is 3.84%, because either there was insufficient information available for songwriting process coding or writing credit information was absent or uninterpretable. This level of missing data has been characterized as inconsequential. See Yiran Dong & Chao-Jing Joanne Peng, Principled Missing Data Methods for Researchers, 2 SPRINGERPLUS 222, 223 (2013) (citing Joseph L. Schafer, Multiple Imputation: A Primer, 8 STAT. METHODS MED. RES. 3, ? (1999)).

146. See supra text accompanying note 55 for general copyrightability considerations. See infra notes 159–64 and accompanying text for the analysis applied to data in this study.

147. See supra note 55.

148. The search of the RIAA Gold & Platinum database for Group and Duo artists resulted in an initial list of 1,669 group and duo performances, many of which were not by bands. The study excluded 666 search results. Search results were excluded for non-band group performances as well as bands mostly performing songs not written by band members (19.47% of results; for example, Mormon Tabernacle Choir or folk groups performing songs in the public domain), backing bands (4.55% of results; for example, Dave Matthews Band), and bands for which insufficient information was available concerning songwriting process or song credits (3.84% of results).

149. See infra note 159. By the mid 1970s, the RIAA Gold certification requirements were: 200,000 units sold for an album or 65,000 albums sold. By 1988, the RIAA increased this number to 500,000 units and a Platinum seal was awarded to those artists with over 1,000,000 units sold. A unit is defined as a physical or digital album sale. The Gold certification indicates sales of 500,000 and Platinum of 1,000,000 units. A unit is defined as a permanent track download, 1,500 on-demand streams, or some combination of the two. (Physical singles sales are now largely nonexistent.) Between 1976 and 1989, Platinum certification indicated sales of 2 million units. See supra note 149, at viii.

150. To classify bands, I hired outside coders to compile and review publicly available sources of information on the songwriting processes of the Gold Record bands and to code them according to the songwriting contributions protocol. The reliability of source material for each band was classified by a coder as very strong, strong, satisfactory, or insufficient information (these bands were excluded). Source reliability was very strong when the code was based primarily on unambiguous direct interview quotes
These bands occupied a middle ground between, on the one hand, groups in which all members made more or less even contributions to songwriting (even contributions bands), and, on the other hand, bands in which some members did not contribute to songwriting at all (some members do not contribute bands).\textsuperscript{153} The research and coding processes were highly labor intensive, taking several hundred hours over which thousands of sources were screened and compiled.\textsuperscript{154} 

In addition, unless all of a band’s members made independently copyrightable contributions to songwriting, the band was classified as one in which some members do not contribute.\textsuperscript{155} The copyrightability of songwriting contributions was assumed when quotes labeled band members as songwriters or confirmed members’ involvement in songwriting in from the band members. Source reliability was strong when third-party quotes were drawn from mainstream or music-focused publications and clearly delineated the songwriting process. Satisfactory reliability was given to codes based primarily on tertiary or amateur sources. Overall, source reliability was very strong or strong for 78% of the bands and 22% satisfactory. Multiple sources support the coding of 87% of bands, and source reliability was very strong or strong a majority of the time (79%) when coding was based on a single source. An independent coder coded an overlap of 10% of the bands (100). 

153. Band members’ contributions to songwriting were assessed on the basis of the writing process for individual songs, rather than the band’s overall song output. This means bands such as Queen, in which all band members contributed solo written songs to the group’s output more or less evenly, were coded as some members do not contribute, rather than as even contributions. While this approach has the potential to cloud the interpretation of co-authorship crediting, in practice the codes assigned at the per song level and overall output level converged 99% of the time.

154. First, the coders collected and coded data on a subset of the Gold Record bands. I fine-tuned the coding protocol, then all bands were re-coded. The design of the coding process incorporated guidelines, derived from Klaus Krippendorff and Kimberly Neuendorf, presented in Mark A. Hall & Ronald F. Wright, Systematic Content Analysis of Judicial Opinions, 96 CAL. L. REV. 63, 107–17 (2008). Interrater reliability was measured as 84.5% using Krippendorff’s alpha; percent agreement was 91%. Krippendorff’s alpha is a standard measure of agreement between multiple coders. See Klaus Krippendorff, Content Analysis: An Introduction to Its Methodology 221–22 (2d ed. 2004).

155. The footnoted sentences in this paragraph which follow are reproduced from Sarah Polcz, supra note 7, which relies upon the same dataset.
general terms. When members’ particular contributions were described, case law (interpreting the Copyright Act) was the primary basis for assessing their copyrightability. Band member contributions which included the

156. Uncontradicted assumptions were informed by genre norms; for example, rappers were taken to be delivering their own verses, and members of electronic dance music (“EDM”), rap and hip-hop groups described as “producers,” “programmers,” or “beat makers” were assumed to be making copyrightable musical contributions. See Tonya M. Evans, Sampling, Looping, and Mashing . . . Oh My!: How Hip Hop Music Is Scratching More than the Surface of Copyright Law, 21 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 843, 852–53 (2011); Chris Robley, Should My Producer Get Publishing and Songwriting Credit?, DIY MUSICIAN (July 11, 2018), https://diymusician.cdbaby.com/music-rights/does-my-producer-deserve-publishing-and-songwriting-credit [https://perma.cc/MF8P-DLS3]. If any band members were described as making only contributions to songs that are not legally considered songwriting—such as arrangement, suggestions or feedback—then their bands were coded as some members do not contribute. To distinguish between uneven and even contributions by band members, industry norms, where existing, supplied assumptions; for example, lyrics were weighted as comprising half of the song. See Daniel Abowd, FRE-Bird: An Evidentiary Tale of Two Colliding Copyrights, 30 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1311, 1329 (2020). Since compositions may be the product of jam sessions or studio experimentation, a sound recording may represent the fixed form of the composition. See Bridgeport Music, Inc. v. UMG Recordings, Inc., 585 F.3d, 267, 276 (6th Cir. 2009); Robert Brauneis, Musical Work Copyright for the Era of Digital Sound Technology: Looking Beyond Composition and Performance, 17 TUL. J. TECH. & INTELL. PROP. 1, 28 (2014) (“By 2012, 77% of musical work registrations were accompanied by phonorecord deposits and only 17% by deposits of musical notation.”). With this in mind, coders were instructed to regard contributions as “arrangements”—contributions to the sound recording rather than the music composition—only when band members clearly described them as such, with the understanding that the interviewee was aware of the distinction. These represent the categories of contribution ruled not to be protectible under the Childress standard. See Erickson v. Trinity Theatre, Inc., 13 F.3d 1061, 1068 (7th Cir. 1994); Childress v. Taylor, 945 F.2d 500, 509 (2d Cir. 1991); BTE v. Bonnecaze, 43 F. Supp. 2d 619, 623 (E.D. La. 1999) (holding no joint authorship when a musician contributes unfixed “ideas and helpful insights”). Interviewees discussed a variety of contributions, some copyrightable (whether to the composition or to the sound recording) and others likely not.

157. See, e.g., Tim Louie, An Interview with Sixx:A.M.: Returning with Their Own Prayers for the Damned, AQUARIAN (May 18, 2016), https://www.theaquarian.com/2016/05/18/an-interview-with-sixxam-returning-with-their-own-prayers-for-the-damned/ [https://perma.cc/L9S-U4WU] (“It’s the three of us getting together in a room picking up instruments and talking. We talk a lot before we even start writing, discussing subject matters, and working through melody ideas, working through riff ideas and we all bring in ideas.”).

158. Additionally, the United States Copyright Office (“USCO”) was a source for the concept that a musical work consists of four copyrightable elements: melody, rhythm, harmony, and lyrics. U.S. COPYRIGHT OFF., COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 802.3 (3d ed. 2021).
elements of a musical work—lyrics,\textsuperscript{159} melody,\textsuperscript{160} harmony,\textsuperscript{161} and rhythm\textsuperscript{162}—were assumed to be sufficiently original\textsuperscript{163} and treated as copyrightable.\textsuperscript{164} Most bands were classified as some members do not

\textsuperscript{159} Individual words and short phrases are typically denied copyright protection. \textit{Nimmer & Nimmer, supra note 30, § 2.01[B][3]. However, this general rule may not be applicable in a songwriting context. See Goldstein, supra note 9, § 2.8, at 2:102–2:102.1 (“[T]he Act’s inclusion of ‘accompanying words’ in its reference to musical works means that musical and lyrical elements that by themselves would not be sufficiently original and expressive to qualify for copyright may combine with each other to produce a copyrightable work.”) Courts have been willing to consider the copyrightability of lyrics that would not reach the originality threshold if published as a literary work. See, e.g., \textit{May v. Sony Music Ent., 399 F. Supp. 3d 169 (S.D.N.Y. 2019)} (refusing to dismiss an infringement claim based on the lyric “We run things. Things no run we.”). It is unlikely that band members would be described as lyricists, lyric writers or lyrical contributors if their only contributions failed to meet this threshold of originality.

\textsuperscript{160} Goldstein wrote, Melody in a musical composition consists of a succession of notes, as well as the long and short durations of individual notes, organized around the composition’s rhythm. Because melody is so salient, and is relatively unconstrained by musical convention, it is typically the principal vessel of originality in musical compositions.

\textit{Goldstein, supra note 9, § 2.8, at 2:102.1–2.}

\textsuperscript{161} “Harmony gives depth to a musical composition. It might consist of two or more voices, separated by a constant span of notes, simultaneously singing the melody, or it might consist of chords—the simultaneous sounding of individual notes—harmoniously connected to each other and to the composition’s melody.” \textit{Goldstein, supra note 9, § 2.8, at 2:102.2. See also Williams v. Gaye, 895 F.3d 1106 (9th Cir. 2018) (Blurred Lines Case) (finding no reversible error in an infringement verdict based substantially on rhythmic and harmonic elements). Harmonic elements appeared in the coding in the form of chords and chord progressions.

\textsuperscript{162} “Rhythm is the physical element of music, the steady beat that sets a listener’s fingers tapping. Although rhythm can be varied, the dictates of musical convention will typically constrain variety. As a result, courts rarely find originality in rhythm alone.” \textit{Goldstein, supra note 9, § 2.8, at 2:102.1–2; see also Bridgeport Music, Inc. v. UMG Recordings, Inc., 585 F.3d 267 (6th Cir. 2009) (rhythmic elements copyrightable)}; New Old Music Grp., Inc. v. Gottwald, 122 F. Supp. 3d 78 (S.D.N.Y. 2015) (drum part copyrightable); BMS Ent./Heat Music LLC v. Bridges, No. 04 CIV. 2584 (PKC), 2005 WL 1593013, at *1 (S.D.N.Y. July 7, 2005) (rhythmic elements copyrightable); Santryll v. Burrell, No. 91 CIV. 3166 (PKL), 1996 WL 134803, at *1 (S.D.N.Y. Mar. 25, 1996) (rhythmic elements copyrightable). Rhythmic songwriting elements often appeared in the coding in the form of drum parts, basslines, and beats.

\textsuperscript{163} The originality (and thus copyrightability) of the type of contribution is discussed supra. The minimum quantity of contribution also required consideration. A recent case offers the guideline (in dicta) that this is certainly more than three or four notes, but perhaps as few as seven. See Skidmore v. Zeppelin, 952 F.3d 1051, 1071 (9th Cir.) (en banc). In practice, sources did not reach this degree of specificity. See also \textit{U.S. Copyright Off., supra note 158, § 802.3(B) (“There is no predetermined number of notes, measures, or words that automatically constitutes de minimis authorship or automatically qualifies a work for copyright registration.”).}

\textsuperscript{164} The copyrightable expression in a musical composition is typically found in its melody, harmony, rhythm or some combination of the three. See \textit{Goldstein, supra note 9, § 2.8, at 2:102.1–102.3.103; Nimmer & Nimmer, supra note 30, § 2.05[D]; see also 2 \textit{William F. Patry, Patry on Copyright,} § 3:93 (“Originality in a musical composition consists not just of melody or harmony, but also in the combination of these two in addition to any other elements, such as rhythm or orchestration.”). While melody was long privileged as the sole source of copyrightable expression in musical compositions, courts have sometimes—and perhaps increasingly—been willing to find other aspects of the work copyrightable. See \textit{Joseph P. Fishman, Music as a Matter of Law, 131 Harvard L. Rev. 1861, 1870–73 (2018). Joint authorship cases concerning songwriting are typically decided on intent and rarely reach the question of copyrightability. Most discussion of the copyrightability of song elements has therefore arisen out of an infringement context. Infringement cases in music, involving highly fact-specific determinations, have understandably not produced a list of copyrightable and uncopyrightable elements that can be applied mechanically: the most that can be said is that certain elements may (or may
contribute (555/1,003, or 55%), followed by uneven (258/1,003, or 26%); it was least common for all members to contribute evenly to songwriting (190/1,003, or 19%).

Next, I assessed whether uneven bands credited all members as co-authors of their songs. A song’s writers are listed in several places: liner notes, on PRO registrations, and in United States Copyright Office (“USCO”) registrations. I consulted PRO registrations and validated that they correspond to USCO registrations.165 A band was classified as one in which all members are co-authors (true/false)166 if, for a majority of its songs, all the members of the band in the year the song was released were credited as writers.167 For 38% of the 1,003 bands in the study, it was true that all members are co-authors.

Other factors beyond writing contribution may influence whether or not lesser contributors receive co-authorship credit. For this reason, I collected data on a number of factors. I designated the lowest number of members the band had during its active years as a representative band size168 and identified

not) be copyrightable. Furthermore, the infringement analysis does not itself determine copyrightability. In some instances, infringement has been found on the basis of elements that may not themselves be independently copyrightable. See Swirsky v. Carey, 376 F.3d 841, 848 (9th Cir. 2004) (“[T]o disregard chord progression, key, tempo, rhythm, and genre is to ignore the fact that a substantial similarity can be found in a combination of elements, even if those elements are individually unprotected.”); Three Boys Music Corp. v. Bolton, 212 F.3d 477, 485–86 (9th Cir. 2000).

165. Courts have not recognized PRO registrations as evidence of authorship, but USCO registrations constitute “prima facie evidence of the validity of the copyright and the facts stated in the certificate of registration.” U.S. COPYRIGHT OFF., supra note 158, § 202. Therefore, USCO registrations were searched and compiled for ten songs by all bands with uneven contributions that include all members as co-authors. The credited writers in the PRO registrations match listed co-authors in USCO registrations 99% of the time. Also, 37% of the songs registered with PROs were not registered in the USCO database. See Zvi S. Rosen & Richard Schwinn, An Empirical Study of 225 Years of Copyright Registrations, 94 TUL. L. REV. 1003, 1030 (2020) (noting that, over the course of the past thirty years, music registrations with USCO “fell off a cliff to levels not seen since the 1930s”).

166. This relied on assembling, per song, the number of band members and the number of co-authors credited.

167. The number of members with writing credit was compared to the number of members the band had in the year each song was released. If the number of member co-authors was less, the song was coded as false (per song; variable used only in computing per band level all members are co-authors), otherwise as true (per song). The total number of true songs was counted and compared to the total number of the band’s songs. When more than 50% of a band’s songs were credited to all members of the band in the year the song was released, the band was coded as true for the variable all members are co-authors. To determine the number of members in each band at the time their songs were released, discographies including year of release information were obtained from ALLMUSIC, https://www.allmusic.com/ [https://perma.cc/4GVX-XYGQ]. Discography data was web-scraped. When AllMusic did not provide details on the year in which a song was released, a web search was conducted. After this, several sources were reviewed to find the number of band members in each year songs were released: band members were listed on AllMusic, Wikipedia, band websites, in liner notes, and often named in interviews. Touring and session musicians were not counted as band members. The names of the writers credited with the songs of bands in the Gold Record database were obtained from the online repertories of ASCAP and BMI.

168. The size of a band’s membership could influence how willing members are to include all
enough observations.

169. Genre data was obtained from AllMusic’s “genres” listing for each band. Music Genres, https://www.allmusic.com/genres [https://perma.cc/KN52-AVL9]. AllMusic’s proliferation of subgenres (over 120) is highly useful for capturing subtle commonalities across the site’s more than 30 million tracks. However, this subgenre classification scheme is too granular for the size of this study’s dataset. At the same time, AllMusic’s twenty-one higher level genre classifications potentially collapse meaningful differences within the study sample of Gold Record bands (for instance, by combining Pop and Rock into a single genre). For this reason, I decided to group together the bands’ AllMusic subgenres into the following nine genre categories: Rock (48%); Latin (2.9%); Country (4.4%); Metal (6.5%); Punk (2.1%); Pop (15%); Reggae (0.8%); Hip Hop, R&B, Gospel, Jazz (19%); and Electronic (1.7%). AllMusic frequently associates artists with multiple subgenres. In the event of a band’s multiple subgenre classifications corresponding to more than one of the study genre groups, the band was assigned to the study genre group with fewer observations.

170. Geographic regions are sometimes thought to vary in terms of attitudes that could relate to decisions about including lesser contributors as co-authors (for example, Southern communalism or coastal capitalism). For this reason, the geographic regions of bands from the United States and its territories were coded according to the location where the band was started. Location data was obtained from Wikipedia, which was then classified into regions using the boundaries of the U.S. Divisions and Regions of the U.S. Census Bureau, widely used regional divisions for statistics and data collection: Northeast (17%); Midwest (8.4%); West (26%); and South (20%). U.S. CENSUS BUREAU, GEOGRAPHY DIV., CENSUS REGIONS AND DIVISIONS OF THE UNITED STATES, https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf [https://perma.cc/FD3M-3LUY]. As the U.S. Census Bureau does not include Puerto Rico in any census region, bands from Puerto Rico were classified as South. All bands originating outside the United States and its territories were classified as Non-USA (28%).

171. In keeping with the common practice of organizing discussions of the history of popular music around particular decades, bands were assigned to a period spanning ten years according to the year in which their first album was released. The years in which albums were released was obtained from each band’s profile on AllMusic. The decade classifications used are 1960s and earlier (8.9%); 1970s (13%); 1980s (23%); 1990s (29%); 2000s (18%); and 2010s and later (8.6%). In general, no region or decade dominated group genesis, though there were comparatively fewer music groups prior to 1980.

172. This was analyzed as a true/false variable. It relied on assembling a year-specific version for all members are co-authors variable for the first and last year of a band’s existence. Bands might initially decide to include all members as co-authors, or not, but change their co-author inclusion practices in subsequent years. To track the potential for this occurrence, an all members are co-authors by year (true/false) variable was produced for each year the band has released songs. Bands were then categorized as initial year co-author inclusion (true/false), based on the value of all members are co-authors by year, in the year of their first release. The initial year co-author inclusion code for each band was compared against the all members are co-authors by year codes for each release year. If there were any occurrences differing from the bands’ initial year co-author inclusion code, the band was code as true for co-author inclusion changed, and otherwise as false. Further, 75% of bands were false for co-author inclusion changed.
TABLE 1. Descriptive Statistics for Gold Record Bands 1959–2021

<table>
<thead>
<tr>
<th>Variable</th>
<th>N = 1003</th>
</tr>
</thead>
<tbody>
<tr>
<td>All members are co-authors</td>
<td>379 (38%)</td>
</tr>
</tbody>
</table>

Songwriting

| Even                                           | 190 (19%)|
| Uneven                                         | 258 (26%)|
| Some members do not contribute                 | 555 (55%)|

Decade

| 1960s and earlier                             | 89 (8.9%) |
| 1970s                                         | 129 (13%) |
| 1980s                                         | 234 (23%) |
| 1990s                                         | 288 (29%) |
| 2000s                                         | 177 (18%) |
| 2010s and later                               | 86 (8.6%) |

Members

| 2                                             | 215 (21%) |
| 3                                             | 220 (22%) |
| 4                                             | 349 (35%) |
| 5                                             | 158 (16%) |
| 6+                                            | 61 (6.1%) |

Genre

| Rock                                          | 478 (48%) |
| Hip Hop, R&B, Gospel, Jazz                    | 190 (19%) |
| Pop                                           | 151 (15%) |
| Metal                                         | 65 (6.5%) |
| Country                                       | 44 (4.4%) |
| Latin                                         | 29 (2.9%) |
| Punk                                          | 21 (2.1%) |
| Electronic                                    | 17 (1.7%) |
| Reggae                                        | 8 (0.8%)  |
2. Results

From 1959 to 2021, uneven bands typically included all members as co-authors (140/258 or 54%). This tendency strengthened over time, specifically throughout each of the last three decades, even while accounting for genre, region of origin, and representative band size (p < 0.01).173 Most uneven bands with fewer than five members include all members as co-authors.174 Among bands with five or more members, a considerable majority (66%) have some members who do not contribute to songwriting, and there were too few even or uneven contribution bands of that size to investigate co-author inclusion rates and whether copyrightable contributions by all members suffice for co-authorship credit or whether some other factor, perhaps control, is required.175

To pursue the trend of increasing co-author inclusion over time, I focused on uneven bands formed after 1990 (n=175). A significant majority of these groups credit lesser contributors as co-authors (111/175, or 63%).176

173. First, for all Gold Record bands with any level of band member songwriting contributions, I used logistic regression analysis to investigate whether all members are co-authors was associated with songwriting contributions, genre, region, decade, or representative band size. The reference group for decade was “1980s.” Songwriting contributions were the most important predictors of all members are co-authors. Compared to bands in which some members do not contribute to songwriting, bands with even (or 2.9, p<0.001) and uneven (or 1.9, p<0.001) were significantly more likely to include all members as song co-authors. Significant associations were also found with representative band size, decade, and genre, but not region (p<0.001). Representative band size: Compared to four-member groups, two-member groups were significantly more likely to include all members as co-authors (p<0.001); five-member groups (p<0.05) and groups with six or more members (p<0.005) were significantly less likely to do so. For “decade,” compared to the 1980s, groups formed in the 1960s or earlier were significantly less likely (p<0.05) to include all members as co-authors, whereas this was less common with bands formed in the 1990s (p<0.05), 2000s (p<0.005), and 2010s and later (p<0.01). Genre: Compared to Pop groups, Latin (p<0.05) and Hip Hop, R&B, Gospel, and Jazz (p<0.05) groups were significantly less likely to include all members as co-authors. For the subgroup of uneven songwriting contributions bands, to a lesser extent, a band size of two members was also associated with all members included as co-authors (p<0.05).

174. Z-test of one proportion, p<0.05.

175. Such analysis would be underpowered.

176. Z-test of one proportion, p<0.001, 95% CI 56%-71%.

<table>
<thead>
<tr>
<th>Region</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>170 (17%)</td>
</tr>
<tr>
<td>Midwest</td>
<td>84 (8.4%)</td>
</tr>
<tr>
<td>West</td>
<td>265 (26%)</td>
</tr>
<tr>
<td>South</td>
<td>204 (20%)</td>
</tr>
<tr>
<td>Non-USA</td>
<td>280 (28%)</td>
</tr>
</tbody>
</table>
This preference was less common with larger bands, but otherwise was not associated with other factors.\textsuperscript{177}

\textbf{TABLE 2. Logistic Regression for Co-Author Inclusion: Uneven Contributions Bands 1959–2021}

<table>
<thead>
<tr>
<th>Variable</th>
<th>log(OR)</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textbf{Decade} (ref. cat.: 1980s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960s and earlier</td>
<td>-0.30</td>
<td>-1.6, 0.92</td>
<td>0.6</td>
</tr>
<tr>
<td>1970s</td>
<td>-0.12</td>
<td>-1.3, 1.0</td>
<td>0.8</td>
</tr>
<tr>
<td>1990s</td>
<td>1.2</td>
<td>0.35, 2.1</td>
<td>0.007*</td>
</tr>
<tr>
<td>2000s</td>
<td>1.2</td>
<td>0.34, 2.1</td>
<td>0.007*</td>
</tr>
<tr>
<td>2010s and later</td>
<td>1.5</td>
<td>0.39, 2.6</td>
<td>0.009*</td>
</tr>
<tr>
<td>\textbf{Members} (ref. cat.: 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1.2</td>
<td>0.21, 2.3</td>
<td>0.022*</td>
</tr>
<tr>
<td>3</td>
<td>-0.04</td>
<td>-0.81, 0.73</td>
<td>&gt;0.9</td>
</tr>
<tr>
<td>5</td>
<td>-0.73</td>
<td>-1.5, 0.05</td>
<td>0.067</td>
</tr>
<tr>
<td>6+</td>
<td>-1.4</td>
<td>-3.0, 0.05</td>
<td>0.075</td>
</tr>
<tr>
<td>\textbf{Genre} (ref. cat.: Pop)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rock</td>
<td>0.61</td>
<td>-0.25, 1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Hip Hop, R&amp;B, Gospel,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jazz</td>
<td>-0.80</td>
<td>-1.9, 0.27</td>
<td>0.15</td>
</tr>
<tr>
<td>Country</td>
<td>-1.7</td>
<td>-3.6, 0.01</td>
<td>0.060</td>
</tr>
<tr>
<td>Metal</td>
<td>-0.09</td>
<td>-1.3, 1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Punk</td>
<td>-0.47</td>
<td>-2.7, 1.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Electronic</td>
<td>-1.4</td>
<td>-3.4, 0.57</td>
<td>0.2</td>
</tr>
<tr>
<td>Reggae</td>
<td>13</td>
<td>-167, NA</td>
<td>&gt;0.9</td>
</tr>
</tbody>
</table>

\textsuperscript{177} I used logistic regression to investigate associations with representative band size, genre, and region. The only significant association was with larger band sizes, which were negatively associated with all members are co-authors (five members p<0.05, or -1.1; six or more members p=0.054, or -1.8). Overall, bands with five or more members were significantly more likely to be coded as some members do not contribute (145/219, or 66%) than bands with four or fewer members (410/784, or 52%) (z-test of two proportions p<0.001).
<table>
<thead>
<tr>
<th>Region (ref. cat.: Northeast)</th>
<th>log(OR)</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>-0.51</td>
<td>-1.9, 0.82</td>
<td>0.5</td>
</tr>
<tr>
<td>West</td>
<td>-0.07</td>
<td>-0.91, 0.77</td>
<td>0.9</td>
</tr>
<tr>
<td>South</td>
<td>0.36</td>
<td>-0.57, 1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Non-USA</td>
<td>0.11</td>
<td>-0.80, 1.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Notes: *p < 0.05; **p < 0.005.

TABLE 3. Logistic Regression for Co-author Inclusion: *Uneven* Contributions Bands 1990–2021

<table>
<thead>
<tr>
<th>Variable</th>
<th>log(OR)</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Songwriting</strong> (ref. cat.: Some members do not contribute)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Even</td>
<td>2.9</td>
<td>2.4, 3.5</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Uneven</td>
<td>1.8</td>
<td>1.4, 2.1</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td><strong>Decade</strong> (ref. cat.: 1980s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960s and earlier</td>
<td>-0.94</td>
<td>-1.7, -0.20</td>
<td>0.016*</td>
</tr>
<tr>
<td>1970s</td>
<td>-0.33</td>
<td>-1.0, 0.27</td>
<td>0.3</td>
</tr>
<tr>
<td>1990s</td>
<td>0.50</td>
<td>0.06, 1.0</td>
<td>0.026*</td>
</tr>
<tr>
<td>2000s</td>
<td>0.74</td>
<td>0.23, 1.2</td>
<td>0.004**</td>
</tr>
<tr>
<td>2010s and later</td>
<td>0.90</td>
<td>0.23, 1.6</td>
<td>0.009*</td>
</tr>
<tr>
<td><strong>Members</strong> (ref. cat.: 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.91</td>
<td>0.43, 1.4</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>3</td>
<td>0.02</td>
<td>-0.42, 0.45</td>
<td>&gt;0.9</td>
</tr>
<tr>
<td>5</td>
<td>-0.61</td>
<td>-1.1, -0.11</td>
<td>0.017*</td>
</tr>
<tr>
<td>6+</td>
<td>-1.5</td>
<td>-2.6, -0.56</td>
<td>0.003**</td>
</tr>
<tr>
<td><strong>Genre</strong> (ref. cat.: Pop)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rock</td>
<td>0.37</td>
<td>-0.14, 0.89</td>
<td>0.2</td>
</tr>
<tr>
<td>Hip Hop, R&amp;B, Gospel, Jazz</td>
<td>-0.79</td>
<td>-1.4, -0.16</td>
<td>0.014*</td>
</tr>
<tr>
<td>Country</td>
<td>-1.0</td>
<td>-2.0, -0.09</td>
<td>0.034*</td>
</tr>
<tr>
<td>Metal</td>
<td>0.27</td>
<td>-0.52, 1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Latin</td>
<td>-1.5</td>
<td>-3.0, -0.18</td>
<td>0.032*</td>
</tr>
</tbody>
</table>
A significant majority of bands (75%) did not deviate from the practice of crediting or not crediting all members as co-authors which they had established in the year of their first release. Of those 25% of bands that switched credit practices, most of those that changed did so to credit all members as co-authors rather than vice versa.179

3. Open Questions

Study 1 investigated co-author inclusion practices, but the data did not contain details on how songwriting royalties are allocated between the band members who are credited as co-authors.

If creators do consider it unfair for lesser contributors to receive equal co-authorship benefits, then we might expect that even though bands’ lesser contributors are most often treated as co-authors, they receive a smaller share of songwriting royalties than their co-authors who made the most significant contributions. This would be the practice predicted by the scholars advocating for a proportional split default. Study 2 was designed to test this hypothesis.

IV. DO LESSER CO-AUTHORS RECEIVE LESS ROYALTIES?

The scholars arguing for a proportional default split would predict that when collaborators’ contributions to a joint work are unequal, they prefer an unequal royalty split. Study 2 tests this hypothesis not only for music groups,
but for co-written songs in general. Study 2a investigates the songwriting royalty percentage splits of the uneven contributions bands in the Gold Record database using two different approaches. Study 2b adapts one of these approaches to estimate the proportion of uneven co-authored songs in general, using co-written songs in the ASCAP repertory.

A. STUDY 2A: GOLD RECORD BANDS ROYALTY SPLITS

Study 2a compiles uneven Gold Record bands’ and their managers’ disclosures about their royalty splits, along with statements about their splits from other reliable sources. If the proportional preference hypothesis is correct, the results should indicate that when co-authors’ contributions are uneven, they prefer to split songwriting royalties unequally as well.

1. Methodology

First, a coder searched for information on the songwriting royalty split practices of every uneven band in the Gold Record database that includes all members as co-authors (n=140). Split information was found for 21% of these bands that met a standard of “reasonably certain” source reliability (29/140); on this basis their splits were classified as equal or unequal.

Second, to gain further insight into how uneven bands split songwriting royalties, I consulted the ASCAP repertory. In 2015, ASCAP began to disclose the percentages of song royalties under the control of its repertory, likely in preparation for an antitrust review by the U.S. Department of Justice.

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180. Despite the success of machine learning techniques for classifying image data, machine learning techniques have been less successful with music genre classification and human coding continues to generate more satisfactory results. Email from Joel Shor, Senior Software Engineer, Google Research, to Sarah Polcz (May 29, 2019) (on file with author).

181. An equal split variable was created for which bands were coded as true/false. Data was obtained through the online searches only for a subset of uneven bands, and it is not clear whether the bands whose splits are not public is data that is missing at random.

182. This terminology is used by ASCAP to refer to the aggregate percentage of a song’s royalties administered by ASCAP on behalf of its members and/or members of affiliated non-U.S. performance rights organizations. See ASCAP Reveals Its Percentage Share of Over 10M Songs Online, MUSIC BUSINESS WORLDWIDE (Nov. 12, 2015), https://www.musicbusinessworldwide.com/ascap-reveals-its-percentage-share-of-over-10m-songs-online/ [https://perma.cc/7PNF-SU5Z].

the writers’ share of royalties it controls.\footnote{Broad Music Inc. (BMI), https://bmi.com [https://perma.cc/HB3A-AF8T] and Global Music Rights (GMR), https://globalmusicrights.com [https://perma.cc/HGR6-HEVQ], list each PRO’s percentage of control over a work’s total public performance right, without specifying the extent to which this percentage is derived from the writer’s and/or publisher’s share. SESAC, https://www.sesac.com/ [https://perma.cc/FQ4W-F2DZ], does not include any control data in its publicly available repertory. SESAC Repertory, SESAC (2022), https://www.sesac.com/documents/SESAC_REPERTORY.pdf [https://perma.cc/B3DP-S8TN].} I used ASCAP’s disclosures on the proportion of royalties under its control to code each song by the uneven bands as either split equally, or not.\footnote{Songs were coded as true/false for the equal split variable using this information.} A coder searched the ASCAP repertory for songs by the uneven bands that include all members as co-authors (n=140) and with at least one member on whose behalf ASCAP does not collect royalties.\footnote{The data obtained included song titles, credited writers, writers’ PRO memberships, and the proportion of each song’s royalties controlled by ASCAP. The coder then determined whether or not each credited writer was a member of the band and referenced the number of members in each band in the year each song was released. For each song the total number of band members credited as writers was tallied.} Twenty-two bands (22/140, or 16\%) were identified for which split data could be inferred.

The basis for inferring how a song’s royalties are split involved dividing the total writer’s share by the number of credited writers for the song, then evaluating whether the percentage due to each writer under an equal split arrangement was a factor of the percent controlled by ASCAP. If so, the song was classified as split equally; otherwise, the song was classified as not split equally.\footnote{The range of comparison in non-integer cases was expanded to allow for share allocations that round up or down by one.} For example, for a song with two writers, if ASCAP controls 50\% of the writer’s share of royalties, it follows that the non-ASCAP writer is receiving the remaining 50\%. On the other hand, if ASCAP controls more or less than 50\%, the writers are splitting unequally.\footnote{Traditionally, income from music publishing is evenly divided between the songwriter or songwriters (“writer’s share”) and the publisher or publishers (“publisher’s share”). PROs forward 50\% of the publishing income from a song, less fees, to the writers and the other 50\% to the publishers, representing 100\% of the income earned. The stated purpose of conveying the writer’s share directly to the writers, rather than having it distributed to the writers by the publishers, is to prevent unscrupulous behavior on the part of the publishers. See Passman, supra note 114, at 242. ASCAP lists 100\% of the writer’s share of public performance royalty as 50\%, as it is half (along with the 50\% publisher’s share) of the whole public performance right.} 2. Results

The two approaches for identifying royalty splits used in Study 2a—compiling the splits of bands that have publicly disclosed their arrangements and inferring splits using the ASCAP repertory—converge in suggesting that
approximately 80% split equally. Both methods suggest a majority\textsuperscript{190} of *uneven* bands nevertheless split royalties equally: the results of the online searches found that 83% (24/29) of disclosed splits were equal among band members; the PRO data suggests that 77% (17/22) of the bands split equally.

Using these two strategies, Study 2a was able to account for 33% of the *uneven* Gold Record bands that include all members as co-authors (46/140). The two methodologies produced results for different bands, with the exception of six bands for which results were found both ways. For these six bands, the different methodologies led to the same assigned split. These results indicate that most lesser contributors receive an equal split in the context of music groups. Study 2b investigates whether this is also true of co-written songs more generally.

**B. STUDY 2B: ALL CO-AUTHORED SONGS**

To go beyond how bands split royalties and to infer whether lesser contributors for all co-authored songs tend to be rewarded equally, I applied the strategy of inferring splits based on the proportion of royalties controlled by ASCAP to all eligible co-authored songs in the ASCAP repertory.

1. Methodology

The ASCAP repertory contains nearly 7 million songs.\textsuperscript{191} More than 2.5 million of these songs are credited to two or more authors.\textsuperscript{192} However, royalty splits can only be inferred in cases where a song’s royalties are controlled by both ASCAP and another PRO. There were a few steps involved in identifying those songs,\textsuperscript{193} and ultimately royalty split data was obtained for 1,237,764 works; this covers 92% of the songs ASCAP only partially controls, amounting to 48% of all co-authored songs in the ASCAP repertory.\textsuperscript{194}

Each song’s royalties were classified as *split equally* or *split unequally*, by the same methodology adopted in Study 2a. To account for potential

\textsuperscript{190} Z-test of one proportion (> 50%).
\textsuperscript{191} 6,985,181 songs. ASCAP allows anyone to request its repertory. See SESAC Repertory, *supra* note 184.
\textsuperscript{192} 2,612,687 songs. See *id*.
\textsuperscript{193} The repertory as provided by ASCAP includes the total share of songwriting royalties controlled by ASCAP (writers’ shares and publishers’ shares), and the names of writers of each song. Details on the writer’s share controlled by ASCAP are, however, available in ASCAP’s online repertory. The list of co-authored songs was filtered to include only those songs for which ASCAP controlled less than 100% and more than 0% of the total songwriting royalties. The total share controlled by ASCAP was a useful coarse filter for reducing the list of songs for which ASCAP-controlled writer’s share data was then compiled by web scraping.
\textsuperscript{194} To note, 8% of the songs on the reduced list of co-authored songs did not have entries in the online repertory and consequently no data was available for those titles.
misclassifications of unequally split songs as equally split songs, I estimated that a reasonable lower bound for the total proportion of equal split songs should include an 8% downward adjustment on the result of this classification method.\textsuperscript{195} This gave an estimate of the overall proportion of equally split songs in the \textit{all co-authored songs} ASCAP data.

The next step was to estimate the proportion of those equally split songs that were produced through \textit{uneven} contributions by collaborators. As a guide, I referenced the proportions of bands including all members as co-authors for Gold Record bands whose songs were composed by members’ contributions which were \textit{even}, \textit{uneven}, or without contributions by all members. These two datasets are similar at a high level based on the available data.\textsuperscript{196}

2. Results

A significant majority (63\%) of the co-authored songs split royalties equally.\textsuperscript{197} To answer the research question, I needed to identify the subset of the ASCAP songs that were written with \textit{uneven} contributions; however, the full dataset also includes songs written with \textit{even} contributions, gift credits,\textsuperscript{198} and sampling. As a guide for inferring the size of the subset of interest, I refer to Study 1 for the relative shares of the three categories of songwriting contributions of the Gold Record bands including all members.

\begin{footnotesize}
\begin{enumerate}
\item When songs were credited to three or four writers, additional steps were taken to reduce the potential for uncertainty in these split estimates. To adjust for the possibility of three-writer splits where, for example, ASCAP controls 33\% but two writers are members of ASCAP and the split is therefore \textit{unequal} (Writers 1 and 2 share 33\%, Writer 3 gets 66\%), further information was sought. For both three-writer, and four-writer songs, a randomly generated sample of one hundred songs was checked against ASCAP song registrations to obtain a measure of the frequency of unequal splits of the structure described. The frequency of such "hidden inequality" was 5\% for three-writer songs and 11\% for four-writer songs; taking the average suggests an adjustment of 8\%. While it is possible that those splits could still be \textit{unequal} (for example, Writer 1 gets 33\% and instead of splitting the remaining 66\% as 33\% to each of Writer 2 and Writer 3, the split is Writer 2 gets 40\% and Writer 3 gets 26\%), this seems unlikely enough as to be insignificant, particularly as the first order adjustments are small. The most frequently observed number of co-authors in both the Gold Record songs list (38%) and the ASCAP co-authored songs list (62\%) is two writers. A similarly small proportion of songs are credited to six or more writers in both the ASCAP (1\%) and Gold Record song lists (4\%). In both the ASCAP co-authored songs data and the Gold Record bands data, recurrent collaborations are the norm: the nature of a band is that collaborative writer-name combinations occur for most of the band’s songs. In the ASCAP co-authored songs data, the median number of repeated collaborations was five, though most collaborative writer-name combinations occur only once.
\item The ASCAP repertory does not include information on the covariates of the Gold Record database (songwriting contributions, genre, region, decade, or representative band size). The Gold Record bands’ songs list contains 1\% of the songs in the ASCAP co-authored songs data. This reflects the small number of music groups earning Gold Record certifications.
\item p<0.001.
\item A “gift credit” is a writing credit naming someone who did not contribute copyrightable expression to the work. Gift credits are common. Telephone interview with Scott Jungmichel, Senior Vice President of Royalty Distrib. & Royalty Rsch. Servs., SESAC (May 1, 2017).
\end{enumerate}
\end{footnotesize}
as co-authors: even (30%), uneven (44%), and some members do not contribute (26%). Relying on these proportions, I first assume that of the 63% of equal split ASCAP songs, 30% were written with even contributions. The remaining 33% equal split ASCAP songs I assume to have been written with uneven contributions. I assume that 26% of the unequal ASCAP songs credit as writers individuals who did not make a copyrightable contribution (based on the proportion of some members do not contribute bands which did the same). This leaves 11% of the unequal split ASCAP songs assumed to be uneven contributions songs (37% unequal minus 26%), and suggests that the proportion of uneven contributions songs that is equally split is 75%. A further adjustment should be made to account for the possibility of “hidden inequality” described above,¹⁹⁹ which adjusts the estimated proportion downward by 8% to 67%.

This number is lower than the approximately 80% in Study 2a. One reason for this is that I have not taken into account sampling. Sampling inflates the number of total co-written songs, and specifically the number of unequal songs.²⁰⁰

There is no difference in equal splitting between name combinations that only appear once (66%) versus at least ten times (65%). Number of collaborations for a set of writers was negatively associated with equal splitting,²⁰¹ but nevertheless majority preference for equal splitting remained significant even with collaborative groupings with over one hundred credited works together (57%).²⁰² A higher number of credited writers was negatively associated with equal splitting.²⁰³ The majority preference for equal splitting flips with five or more writers (27%).²⁰⁴

¹⁹⁹. See supra Section IV.B.1.
²⁰⁰. An estimated 15–25% of songs use samples of other songs. Tracklib Presents State of Sampling 2019, Tracklib, https://www.tracklib.com/blog(tracklib-presents-state-of-sampling-2019/ [https://perma.cc/A4V8-WALF]. Sampling requires licensing both the sound recording and the song itself. This normally involves an advance payment plus sharing a portion of the copyright income of the song in which the sample is used. On the publishing side, the typical range is 10–30% of royalties, PASSMAN, supra note 114, at 250–51, indicating a likelihood of an unequal split.
²⁰¹. p < 0.001.
²⁰². p < 0.001.
²⁰³. p < 0.001.
²⁰⁴. p < 0.001. Higher numbers of co-writers also increase the chances of unequal splitting attributable to sampling. Because songs with more credited writers are not necessarily more complex or longer than songs with fewer co-writers, higher numbers of writers also reduce the likelihood that all credited writers have made copyrightable contributions, increasing the probability that the writing credits include gift credits, which may also contribute to rates of unequal splitting for songs with many co-authors.
V. GENERAL DISCUSSION

In this final Part, I review some limitations of the studies and how the findings answer the research questions, along with caveats on the support for the equal split rule. I discuss the legal implications and contributions of this research and preview other work focusing on the mechanisms that potentially drive these co-author inclusion and equal split practices.

A. LIMITATIONS

There are several limitations to the data and results of these studies; here I consider some of the most noteworthy. First, whereas a comprehensive database could be constructed to investigate the question of co-author inclusion (Study 1), this was not possible for exploring how royalties are split (Study 2). Instead, there are the convergent lines of Studies 2a and 2b. Each study involved making assumptions during data collection or analysis, which were necessary on account of data or resource limitations. To the extent these assumptions are not supported, the studies’ results and implications may be affected.

The results of the Gold Record database analysis may reflect survivor bias. Only a small fraction of all music groups earns Gold Records; it may be that less successful music groups are less likely to include minor contributors as co-authors. Although it cannot be ruled out, this seems unlikely because bands’ co-author inclusion choices are early business decisions in the groups’ lives, made before the arrival of great success, and are most often stable.

Songs are short by convention, which precluded investigating preferences when disparities in contributions are of the magnitude present in Aalmuhammed. Still, as discussed, the control doctrine has been applied more often than not regardless of the magnitude of the parties’ contributions, and, as argued, co-songwriting is the most important domain where the default rules are likely to apply in practice.

205. Aalmuhammed v. Lee, 202 F.3d 1227, 1233 (9th Cir. 2000).
Figure 2. Studies 1 & 2: Research Questions and Results

Are lesser contributors counted as coauthors? (Study 1)

- No
  - Policy implication: None

- Yes (>60%)
  - Policy implication: Drop "control" doctrine

Do lesser contributing coauthors receive an equal split of royalties? (Study 2)

- No
  - Policy implication: Proportional split

- Yes (>70%)
  - Policy implication: Keep equal split default
B. SUMMARY OF FINDINGS

The control doctrine has resulted in the exclusion of lesser contributors from joint authorship when there was no contract between the collaborators. This, along with other problematic effects, has caused some scholars to propose returning to the pre-control legal regime and retaining the equal split rule. Others propose putting in place a proportional split default rule to better address the concerns with the control doctrine, and implicitly, align with creators’ assumed allocation preferences.

To identify the best choices, Studies 1 and 2 sought to uncover the actual preferences of co-songwriters. I have argued that the best option for co-songwriters is presumptively the best rule on the whole for those collaborating to produce joint works.

1. Are Lesser Contributors Counted as Co-Authors?

First, I explored whether or not lesser contributors in co-songwriting are typically rewarded with co-authorship (Study 1). To observe the leap from contributor to co-author, I constructed the Gold Record database of 1,003 bands—every band that both has a Gold Record and writes its own songs. I found that the inclusion of lesser contributors as co-authors has steadily increased for the past six decades, becoming the typical practice (63%) beginning in the 1990s. I also found that 75% of bands never changed their initial practice of including or not including all members as co-authors. This is consistent with a stable level of songwriting contributions. When bands did shift from their initial co-author crediting choices, it tended to be in the direction of more, rather than less, co-author inclusion. This could be explained by an increase in members’ songwriting contributions, but it also raises questions for future investigation about a possible ratcheting effect, whereby it is hard to renegotiate a generous initial co-author inclusion practice.

The strength of the co-author inclusion result is notable given the heterogeneity of the data, which includes bands from subgenres as diverse as Norteño, Metalcore, Eurodance, Contemporary Christian, Children’s Music, and Punk Rock. The music created by these groups appeals to a wide spectrum of people’s tastes.

This practice runs counter to the de facto exclusion of lesser contributors under the control doctrine. Additionally, to the extent that control is incompatible with recognizing more than a few authors because it is understood as a right to override others’ creative choices, the results are

206. See id. at 1233 (“[Artistic control] would generally limit authorship to someone at the top of
not consistent with co-songwriters sharing that view: songs created through the uneven contributions of four collaborators typically credit all involved.\(^\text{207}\)

Although this preference data strengthens the case against the control doctrine, I find support for limits on grants of co-authorship even for contributors who have made copyrightable contributions. When group size exceeds four contributors, having made a copyrightable contribution—even an equal one—is no longer treated as sufficient for co-authorship in most cases. Thus, considerations beyond contributions do play a role in deciding who is granted co-authorship credit for a joint work, at least in collaborations at scale. This is consistent with the view in Aalmuhammed that “as the number of contributors grows and the work itself becomes less the product of one or two individuals, . . . the word ['author'] is harder to apply.”\(^\text{208}\) Future research might investigate what these other considerations may be. Nevertheless, in the case of co-songwriting, the findings suggest large collaborations are uncommon. On the whole, the concepts and consequences of the control test are at odds with the revealed preferences of this significant creator population. Because it cuts against these revealed preferences, the transaction costs of the current legal regime are presumptively high to the extent that parties seek to contract out (though the data does not report contracting rates).

Future research may explore what accounts for this inclusivity trend. It may be due in part to an increase in the kinds of bands that tend to include all contributors as co-authors, such as smaller bands. There have also been changes in music industry standards and practices, which may have played a role. First, mechanical songwriting royalties doubled—and continued to increase over time—after the Copyright Act of 1976.\(^\text{209}\) As songwriting royalties increased in value, more band members may have sought a piece of the pie. Including all members as co-authors may have facilitated agreements to feature the strongest songs on albums without generating animosity.\(^\text{210}\) Second, there were changes in what contributions were viewed as

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207. To the extent that “control” is understood as control over one’s own contributions rather than the entire work, it is compatible with the findings. However, that has been a minority interpretation of the control doctrine. See supra note 70 and accompanying text.

208. Aalmuhammed, 202 F.3d at 1232.


“songwriting.” In early Rock, the melody writer was considered the writer of the song. Early Rock was rooted in the Blues, and the rhythm portion of the song was often an uncopyrightable standard.²¹¹ Third, musicians have arguably become savvier as Rock culture has developed. In early Rock, the only legally sophisticated party was often the producer, studio owner, label owner, or bandleader. It was in that person’s best interest to limit the number of writers on the song and, if possible, add themselves as writers.²¹²

2. Do Lesser Contributing Co-Authors Receive Less Royalties?

The converging lines of evidence from Studies 2a and 2b suggest that royalties are typically split equally, even with lesser contributing co-authors (over 70% of the time).²¹³ In Study 2a, the songwriting royalty splits of a third of the uneven contributions Gold Record bands were inferred based on information disclosed by the bands’ inner circles or ASCAP; in Study 2b, splits were inferred for co-songwriting more broadly, based on a sample of more than a quarter of co-authored songs registered with U.S. PROs.²¹⁴ Perhaps surprisingly, the underlying preference assumptions of scholars who have argued the law should be revised to favor contribution-based splits were not supported. Instead, the results throw support behind the proponents of the existing equal split rule.

As with initial co-author inclusion choices, there was stability in initial split choices. Co-authors who wrote together only once were as likely to split royalties equally as co-authors who collaborated one hundred times.

²¹¹ See TOM W. BELL, INTELLECTUAL PRIVILEGE: COPYRIGHT, COMMON LAW, AND THE COMMON GOOD 21 (2014) (“[C]ourts have repeatedly protected stock scenarios and motifs . . . from suffering capture within copyright’s exclusive rights. The balcony scene, one-point perspective, blues chord progressions, and other creative building blocks thus remain free for all authors to use and reuse.” (footnote omitted)); Timothy J. McFarlin, Father(s?) of Rock & Roll: Why the Johnnie Johnson v. Chuck Berry Songwriting Suit Should Change the Way Copyright Law Determines Joint Authorship, 17 VAND. J. ENT. & TECH. L. 575, 643 (2015) (“Johnson may have been playing what was, by itself, a preexisting or otherwise uncopyrightable blues chord progression or riff.”); Michael J. Madison, Intellectual Property and Americana, or Why IP Gets the Blues, 18 FORDHAM INTELL. PROP., MEDIA & ENT. L.J. 677, 700–01 (2008) (“[T]he law sees in the blues not the concrete and protectable, but the general and the unprotectable. Individual notes and chords are ‘facts’; chord progressions are ‘ideas’ necessary to expression within the genre . . . Repetition of rhythms, riffs, and even melodies does not constitute ‘originality’ or ‘authorship’ in a copyright sense.”).


²¹³ See, e.g., LaFrance, supra note 76.

²¹⁴ I take this to be a conservative estimate. ASCAP and BMI have 90% market share; the co-authored songs are 48% of co-authored songs in ASCAP’s repertoire, most commonly listed also in BMI’s repertoire.
C. LEGAL IMPLICATIONS

Study 1 affirms the conventional wisdom, endangered by the control doctrine, that contributions are the most important consideration in granting co-authorship. Songwriting contributions overshadowed differences of genre, region, band size, and era. The copyrightability considerations standards have been on somewhat shaky ground as control has expanded to trump other factors in co-authorships tests. These results provide additional support for pushing back against that trend and reasserting a contributions-centered way of thinking about who is a co-author.

At the same time, the results imply that once co-authors are recognized, their comparative contributions are often disregarded when they allocate proceeds among themselves. Co-authorship practices appear as a step-function, rather than a matter of degree. Rather than provide a mandate for establishing a contributions-based default split rule, the findings suggest that the equal split rule is consistent with preferences and does not deter grants of co-authorship to lesser contributors. Taken together, Studies 1 and 2 suggest that equal co-authorship for lesser contributors is the practice of a plurality of the involved co-songwriters. On this basis, the studies lend support to the statutory intent to merge copyrightable contributions standards, or, at least, support the suggestion by Professor Mary LaFrance, and others, that a rebuttable presumption of intent is appropriate.

A return to the intent to merge co-authorship standard would predictably reach undesirable results in certain industries, most notably the film industry and editorial relationships. This section discusses two possible responses.215

215. A third response could be industry-specific joint authorship rules. See, e.g., Kwall, supra note 87, at 62–63; McFarlin, supra note 211, at 660–61; Gregory S. Donat, Fixing Fixation: A Copyright with Teeth for Improvisational Performers, 97 COLUM. L. REV. 1363, 1403–04 (1997); Susan Keller, Collaboration in Theater: Problems and Copyright Solutions, 33 UCLA L. REV. 891, 935 (1986). The industry-specific nature of patent law is well-attested. See Dan L. Burk & Mark A. Lemley, Is Patent Law Technology-Specific?, 17 BERKELEY TECH. L.J. 1155, 1158–85 (2002). And industry-specific carve-outs are well-known in copyright law; for example, the blanket inclusion of all creative motion picture contributions as potential works made for hire. 17 U.S.C. § 101; see also Peter DiCola, Music Copyright, in 2 RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY: ANALYTICAL METHODS 565–66 (Peter Menell & David Schwartz eds., 2019) (discussing ways in which copyright law is tailored to the music industry, notably in infringement); Joseph P. Liu, Regulatory Copyright, 83 N.C. L. REV. 87 (2004). Yet this rule was the result of intense industry lobbying. Cf. Burk & Lemley, supra note 6, at 1637 (warning of “counterproductive special interest lobbying” in tailored patent legislation). Furthermore, creative industry standards, when they can be identified, may run contrary to black letter copyright law, with little room for modification except through legislation. See, e.g., Effects Assocs., Inc. v. Cohen, 908 F.2d 555, 556–57 (9th Cir. 1990) (discussing the apparent custom of unwritten exclusive transfers in the film industry). Or, consider an industry default based on the outcome of 16 Casa Duse, LLC v. Merkin, 791 F.3d 247, 265–66 (2d Cir. 2015): all film work would be work made for hire, even in the absence of a contract. An industry-based approach would need to take into account these and other challenges to further the utilitarian ends of copyright. See generally Polcz, supra note 7.
First, any default rule will not satisfy all situations. Parties can contract out of the default rule, and it is reasonable to expect that sophisticated parties will do so. Inevitably some may fail to put in place a contract through pure oversight. But it is inefficient to change the rule when such oversights are exceptional. In other contexts, when parties failed to contract around default rules, there have been costly settlements that have no doubt subsequently increased attention to such matters down the road.  

Second, future research might explore a parameter-based approach to co-authorship determinations. For example, the number of collaborations was associated with co-author inclusion and royalty split. There has been considerable theoretical debate over the extent to which defaults should be “tailored” (that is, modified) such that they lead to different results for different parties based on some relevant characteristic. This has been recognized to potentially lead to more efficient outcomes by better reflecting decisions that parties would actually make in a costless environment. Default tailoring comes with costs: the cost to lawmakers of identifying and implementing the most efficient tailoring, and the cost to parties of interacting with a default more specific to their circumstances than a one-size-fits-all rule. Thus, the most efficiently tailored rule is likely one that reflects a discrete set of common practices, thereby reducing information costs. This may be why previous proposals to tailor the equal split default have focused on industry-based tailoring as a commonsense default unit. This Article has suggested that the number of collaborators is one potential parameter; if the size of collaborative groups predicts split preference across genres and regions, it is worth investigating whether it is a useful predictor across industries. Pursuing this and other leads may bring about gains in

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218. See Ayres & Gertner, supra note 133, at 117–18; Christopher R. Drahozal & Peter B. Rutledge, Contract and Procedure, 94 MARQ. L. REV. 1103, 1160 (2011) (stating that a complex rule may be a more efficient rule if efficiency gains outweigh increased information costs); Robert E. Scott, A Relational Theory of Default Rules for Commercial Contracts, 19 J. LEGAL STUD. 597, 598 (1990) (noting that rule complexity increases costs).

efficient tailoring over and above what is possible with industry-based rules.\(^{220}\)

**D. WHY EQUALITY: MECHANISMS**

The data presented suggest that when it comes to relative rewards, co-songwriters, on balance, prefer equal over contributions-based allocations—even in unequal collaborations. What can account for this surprising preference for equality? A systematic investigation of the preference mechanisms at work is out of the scope of this Article. I conclude here by priming intuitions connected with the theoretical framework I use elsewhere for that purpose.

Context often determines which of a few interpersonal allocation rules we find to be most psychologically rewarding. There are many contexts in which we find equality—where everyone is rewarded in the same quantities—to be the most psychologically rewarding state of affairs. Under other circumstances, we may prefer contribution-based remuneration. A context can be defined, for example, by who is involved or what goals are involved. There are patterns to when we are likely to have these preferences, which have been studied under various research traditions in distributive justice.\(^{221}\) Earlier, I noted that the members of a large number of bands are friends or family members. Theories that can provide a way of thinking about the influence of parties’ close relationships on the allocations they prefer when distributing a resource—such as royalties—among themselves, are most conducive for understanding this equality preference.\(^{222}\)

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\(^{220}\) The goal is to find the tipping point at which the rule is tailored to the extent that such tailoring maximizes efficiency: where further tailoring would increase net transaction costs. Porat & Strahilevitz, supra note 219, at 1423.


\(^{222}\) See generally ALAN PAGE FISKE, STRUCTURES OF SOCIAL LIFE: THE FOUR ELEMENTARY FORMS OF HUMAN RELATIONS 6063 (1991) (discussing four models for the distribution of resources).
CONCLUSION

The trends in co-songwriters’ preferences revealed by this research offer the first comprehensive look into decisions made every year, hundreds of thousands of times, offering a point of reference for creators. In songwriting, co-authorship matters. Not only does it confer status; it also confers money. For some musicians, co-authorship royalties are their retirement plan. As the lead singer in an all-female Punk Rock band explained songwriting credits, “we’re straight up talking business here.”

And yet, in this Article I have looked at this “business” decision of how to share co-authorship and found that short-term financial self-interest is not the end of the story: main songwriters share songwriting credit, and songwriting royalties, much more generously than the standard by which lesser contributors would be rewarded under the control test. This revealed preference suggests that we can adopt a more inclusive legal criterion for co-authorship while retaining the equal split default and that we can do so without violating creators’ own sense of fairness.

### Table A1. Logistic Regression for Gold Record Bands 1959–2021: Are All Members Included as Co-authors?

<table>
<thead>
<tr>
<th>Variable</th>
<th>log(OR)</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Songwriting</strong> (ref. cat.: Some members do not contribute)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Even</td>
<td>2.9</td>
<td>2.4, 3.5</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Uneven</td>
<td>1.8</td>
<td>1.4, 2.1</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td><strong>Decade</strong> (ref. cat.: 1980s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960s and earlier</td>
<td>-0.94</td>
<td>-1.7, -0.20</td>
<td>0.016*</td>
</tr>
<tr>
<td>1970s</td>
<td>-0.33</td>
<td>-1.0, 0.27</td>
<td>0.3</td>
</tr>
<tr>
<td>1990s</td>
<td>0.50</td>
<td>0.06, 1.0</td>
<td>0.026*</td>
</tr>
<tr>
<td>2000s</td>
<td>0.74</td>
<td>0.23, 1.2</td>
<td>0.004**</td>
</tr>
<tr>
<td>2010s and later</td>
<td>0.90</td>
<td>0.23, 1.2</td>
<td>0.004**</td>
</tr>
<tr>
<td><strong>Members</strong> (ref. cat.: 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.91</td>
<td>0.43, 1.4</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>3</td>
<td>0.02</td>
<td>-0.42, 0.45</td>
<td>&gt;0.9</td>
</tr>
<tr>
<td>5</td>
<td>-0.61</td>
<td>-1.1, -0.11</td>
<td>0.017*</td>
</tr>
<tr>
<td>6+</td>
<td>-1.5</td>
<td>-2.6, -0.56</td>
<td>0.003**</td>
</tr>
<tr>
<td><strong>Genre</strong> (ref. cat.: Pop)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rock</td>
<td>0.37</td>
<td>-0.14, 0.89</td>
<td>0.2</td>
</tr>
<tr>
<td>Hip Hop, R&amp;B, Gospel, Jazz</td>
<td>-0.79</td>
<td>-1.4, -0.16</td>
<td>0.014*</td>
</tr>
<tr>
<td>Country</td>
<td>-1.0</td>
<td>-2.0, -0.09</td>
<td>0.034*</td>
</tr>
<tr>
<td>Metal</td>
<td>0.27</td>
<td>-0.52, 1.0</td>
<td>0.5</td>
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<tr>
<td>Latin</td>
<td>-1.5</td>
<td>-3.0, -0.18</td>
<td>0.032*</td>
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<tr>
<td>Punk</td>
<td>0.87</td>
<td>-0.29, 2.0</td>
<td>0.13</td>
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<tr>
<td>Electronic</td>
<td>-0.50</td>
<td>-1.8, 0.90</td>
<td>0.5</td>
</tr>
<tr>
<td>Reggae</td>
<td>1.0</td>
<td>-1.6, 4.1</td>
<td>0.5</td>
</tr>
</tbody>
</table>
### Region (ref. cat.: Northeast)

<table>
<thead>
<tr>
<th>Region</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>-0.68</td>
<td>-1.4, 0.04</td>
<td>0.069</td>
</tr>
<tr>
<td>West</td>
<td>0.01</td>
<td>-0.49, 0.51</td>
<td>&gt;0.9</td>
</tr>
<tr>
<td>South</td>
<td>0.11</td>
<td>-0.43, 0.65</td>
<td>0.7</td>
</tr>
<tr>
<td>Non-USA</td>
<td>0.26</td>
<td>-0.26, 0.78</td>
<td>0.3</td>
</tr>
</tbody>
</table>

*Notes: *p < 0.05; **p < 0.005.