ARTIVATE A JOURNAL OF ENTREPRENEURSHIP IN THE ARTS

VOL. 13
2024–2025

Who Owns AI?

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ABSTRACT: While artificial intelligence (AI) stands to transform artistic practice and creative industries, little has been theorized about who owns AI for creative work. Lawsuits brought against AI companies such as OpenAI and Meta under copyright law invite novel reconsideration of the value of creative work. This paper synthesizes across copyright, hybrid practice, and cooperative governance to work toward collective ownership and decision-making. This work adds to research in arts entrepreneurship because copyright and shared value is so vital to the livelihood of working artists, including writers, filmmakers, and others in the creative industries. Sarah Silverman's lawsuit against OpenAI is used as the main case study. The conceptual framework of material and machine, one and many, offers a lens onto value creation and shared ownership of AI. The framework includes a reinterpretation of the fourth factor of fair use under U.S. copyright law to refocus on the doctrinal language of value. AI uses the entirety of creative work in a way that is overlooked because of the small scale of one whole work relative to the overall size of the AI model. Yet a theory of value for creative work gives it dignity in its smallness, the way that one vote still has dignity in a national election of millions. As we navigate these frontiers of AI, experimental models pioneered by artists may be instructive far outside the arts. **KEYWORDS:** artificial intelligence, creative labor, Sarah Silverman, OpenAI, ChatGPT, copyright, fair use, governance, economic design. **DOI:** doi.org/10.34053/artivate.13.1.220

In the summer and fall of 2023, a number of authors, including the comedian Sarah Silverman and the mystery writer John Grisham, sued OpenAI and other artificial intelligence (AI) companies for copyright infringement (David 2023; David 2023; Alter and Harris 2023).[1] Plaintiffs alleged that companies were using creators' work as training data for

[1] A set of different lawsuits were filed. Grisham was part of a lawsuit that was filed by the Authors Guild and seventeen writers—with intent to bring a full class-action suit—in the Southern District of New York (David 2023). Silverman and the writers Christopher Golden and Richard Kadrey sued OpenAI and Meta in separate lawsuits filed in the Northern District of California (OpenAI:

their large language models. Writers, they argued, had not granted their permission, and the companies were benefiting from value they had not created.

This group of lawsuits invites reconsideration of how we understand value around creative work, and also how a field such as the arts with such complexities in value can inform the economic models and governance structures of technology companies far beyond the arts. Key to this analysis is the uniquely dual nature of creative workers as both producers and investors. Arts entrepreneurship offers a framework for entrepreneurial thinking that can contend with the truly unknown frontiers of AI, in business model and also corporate form. The unusual economic circumstances of creative work and the experimental political and economic structures being built in and adjacent to the arts—from worker-owned coops and decentralized autonomous organizations to speculative proposals for collective ownership—offer a new lens on how AI offers a fulcrum moment in larger democratic societies to consider the role of large platform technologies companies and the possibilities of cooperative, networked, collectively owned technologies instead.

We may take for granted the role of large companies like Google (Alphabet), Facebook (Meta), and Twitter (X). In the business models of those companies, users are the product. Data generated has value to those companies (which may have other business models as well, such as data storage). We may be habituated to these models, and thus there is an inertia to imagine that AI would—or even "should"—logically be invested in by large, powerhouse technology companies. Yet there are larger movements, some of which come out of blockchain discourse, to imagine systems of organization beyond large technology companies. In that discourse, large tech companies are referred to as "web 2" in which the large platform economies own their users' data, in contrast to the quasi-utopian promise of the decentralized web was the idea of "web 3"—a world in which groups of users owned their own data. Even without any enthusiasm for blockchain, one can see the promise of shared ownership and cooperative models around data governance, for creative work and otherwise.

This paper argues for reconsideration of the ownership and governance models around AI. To say creators should rightfully own shares to the proceeds of AI because it trains off of their work is to apply a logic that is analogous to but not dependent on the idea of web3. If we consider markets to be a design medium, then we are applying principles of economics to make prices represent values and principles of finance to make risk and return travel in lockstep. Currently, the price of AI does not include value because of externalities, including environmental costs, which are not priced in. And risk and return

https://www.documentcloud.org/documents/23869693-silverman-openai-complaint?responsive=1&title=1, and Meta: https://www.documentcloud.org/documents/23869675-kadrey-meta-complaint?responsive=1&title=1) (Davis 2023). Paul Tremblay and Mona Awad joined the Silverman et al. suit though Awad exited it in August 2023. They made six claims: "direct copyright infringement; vicarious infringement; violation of the Digital Millennium Copyright Act (DMCA) by removing copyright management information; unfair competition; negligence; and unjust enrichment" (David 2024). The court dismissed five counts and held that Silverman et al. could still sue for direct copyright infringement (David 2024).

do not move in lockstep because creators who have taken risk to generate work are contributing value for which they are not rewarded. One does not need to assume that any of those creative actors are motivated toward profit, only that they are structurally entitled to it. While AI companies and their investors have taken some risk and are therefore themselves entitled to some reward, again under the basic algebra of markets, they are not entitled to all of the rewards, and a private nonprofit board is not entitled to the governance rights over proceeds that derive from a much greater good.

Copyright issues faced by writers, artists, and other creators of content animate larger questions of who owns AI, who decides, and who benefits. Who owns AI is one of the great political and economic questions of our time, and it points to larger underlying questions of how we organize ourselves as a body politic and as an economy. Even for those outside the arts who are not inherently interested in fine art, what is important about art is that it is a proxy for things that are valued but where people may not agree on what they are worth (Karpik 2010; Fourcade 2011) *and* that value may only come to be known over time (Caves 2000).

This paper's conceptual framework uses as an example the ownership of creative work in order to make the case for generative economic and governance models around AI. Particularly as companies like OpenAI begin to generate revenues, these questions are in urgent need of field-wide consideration and regulation, not to exert undue command-and-control influence over areas of innovation but to set clear guardrails around who has contributed and therefore who benefits. AI is built on a paradox that it can only be informed by the past yet relies on the work of creative courage of people who risked building frontiers of the future. The affordances of the U.S. Constitution to grant temporary monopoly rights to inventors and other creative workers exist to further creativity in the interest of the public good. In parsing AI, we need to design from the starting point of the public good and the risks of individual creators to build that shared resource.

This paper uses the case of Sarah Silverman's creative work and the company OpenAI (the parent company of ChatGPT and GPT-4). The paper presents a new framework that synthesizes a reimagination of the "market test" in copyright as a "market and value test" (Whitaker 2019), while applying theories from arts entrepreneurship on hybrid organizational practice (Whitaker 2023). By applying a "value" lens, we can make distinctions between the "material" and the "machine" of AI and consider the work of individuals in relation to the work of the collective. This distinction can inform our understanding of copyright protections and clarify the role of creative producers as original investors in their own work (Gerber 2017).

In addition, the company OpenAI offers a particularly salient case study for hybrid practice because of its unusual corporate form as multiple entities including a nonprofit governing body, a for-profit arm, and a manager entity. Here, hybrid practice is defined as the application of institutional entrepreneurship (Battilana 2004; Guo 2022) to arts entrepreneurship (Callander and Taylor, 2023; Whitaker 2023) within the larger area of hybrid

organizational forms (Battilana and Dorado 2010; Battilana et al. 2012; Rushton 2014), including both amalgamations of legal form (e.g., a non-profit and related limited liability company (LLC) and newer legal forms such as public benefit corporations (PBCs) of which the crowdfunding site Kickstarter is emblematic. In PBCs, organizations can modify their profit-seeking fiduciary duty with a public benefit charter of other metrics to which they are beholden (Whitaker 2023).[2]

Within this frame, OpenAI is a hybrid organization. It was founded in 2015 as a non-profit "with the goal of building safe and beneficial artificial general intelligence for the benefit of humanity" (OpenAI 2024). In 2019, after the organization had experienced prolonged difficulty accessing capital to fund the large-scale infrastructure of their vision for AI, they founded a for-profit, though profit-capped, arm.[3] That subsidiary has to date been granted $10 billion in funding from Microsoft (Metz and Weise 2023). The for-profit arm is governed by the nonprofit via a "manager entity" called OpenAI GP LLC. The for-profit subsidiary can distribute profits to shareholders but—not dissimilar to the functioning if not legal form of a public benefit corporation—must follow the mission of the non-profit. According to OpenAI, if the company makes profits above the cap set for the for-profit, those proceeds are "returned to the nonprofit for the benefit of humanity" (OpenAI 2024).

This hybridity in their corporate governance structure adds to the complexity of who owns creative work. While it may seem laudable to return profits to a non-profit, it is also complicated to say that if there is a public benefit of collective creative work, the decisions about apportioning those funds will be made by a group of privately appointed directors of a nonprofit. This structure calls to mind critiques of philanthropy. In particular, as Giridharadas (2018) has argued, philanthropists have inherently vested interests, and some of the problems and opportunities that societies face need the mechanism of *democracy* instead. In this case, if creative workers—individually, as Sarah Silverman, and collectively as the body politic of all creative workers—have generated value, why does a private nonprofit determine the distribution of those funds for the benefit of humanity? In response, this paper considers both the role of democracy and the application of new models for cooperative and collaborative governance (Schneider 2018, 2024). Toward that end, the paper considers the case of Silverman and OpenAI as emblematic as a hypothetical for theory-building around who owns AI for creative work.

These questions of who owns work and who decides are structurally important no matter the scale of profits. At the same time, they become more urgent and important as AI companies start to make earnings. As of September 2024, OpenAI announced substantial revenues and projected growth if still, by its own accounting, substantial operating losses (Isaac and Griffith 2024). Based on fundraising prospectus of the company, Isaac

[2] A variety of hybrid legal entities exist including flexible profit LLCs. For more information see Rushton 2014 or Whitaker 2023.

[3] Per the OpenAI "Our Structure" section of their website: They had originally aimed to raise $1 billion but only received $130.5 million in donations (OpenAI 2024).

and Griffith (2024) reported that OpenAI made $300 million in revenue in August 2024, an increase of 1700% over the eighteen months to early 2023. OpenAI projected $3.7 billion in revenue for 2024, a number modeled to grow to $11.6 billion in 2025 and $100 billion by 2029.[4] Adding to the urgency is not only the revenue but the costs, especially those such as the environmental impact of enormous energy usage that are borne by society at large. While those costs are difficult to quantify, we can see their scale indirectly in the rapidly growing real estate market for data centers (Batson 2024; Vincent 2024).[5]

1. Method

A key framework relied on in this paper is what Gümüsay and Reinecke (2024) have called "prospective theorizing." They propose that prospective theorizing is the design of theory "to cultivate the creation of desirable futures by imagining, or helping others imagine them in the first place" (Gümüsay and Reinecke 2024: pp. 2-3). The authors posit this approach as a critique of and response to "the overriding temporal orientation within almost all theorizing towards the empirical past" (Gümüsay and Reinecke 2024: p. 2). By being circumscribed to what has happened before and what can be measured, empirically driven theory-building is, they argue, limited to *projecting* as opposed to *imagining* futures. Instead, theory-building can "inspire and guide meaningful change forward in the world" particularly given the likelihood that "with the looming planetary emergency . . . the future is unlikely to be anything like the past" (Gümüsay and Reinecke 2024: p. 2).

AI itself has this bias toward the past, given that it trawls data facing backwards, creating what Gümüsay and Reinecke (2024) term followship and not leadership. Future-oriented theorizing can still have "speculative rigor" (Gümüsay and Reinecke 2024: p. 16) based on *generative potency* (the ability of theory to support ideation about designing "desirable futures," *process transparency* (clarity about the means of theorizing and projected self-awareness or "reflexivity" about any normative assumptions or lack of representation in consulted co-designers), and *speculative plausibility* (internally coherent logic, and adherence to basic "values guardrails such as human rights"). While there is moral complexity to how the common good is defined, the overall approach aligns with artmaking as an emergent and entrepreneurial method (Callander 2019; Sarasvathy 2001) and an orientation to evaluate the future as a perpetually invented world more than as a knowable destination or assured outcome (Whitaker 2016; Bureau et al. 2024). The approach also dovetails with the focus within arts entrepreneurship on pedagogy (Toscher 2019 White 2013,

[4] According to Isaac and Griffith (2024), OpenAI was aiming to raise $7 billion of new investment on a valuation of $150 billion, with 10 million current paid subscribers of ChatGPT at a monthly cost of $20.
[5] According to a JLL report (Batson 2024), the real estate market for co-located data centers has doubled in the past four years and new construction has gone up 700% over the past two years, but the vacancy rate is only 3%. Empty office buildings like One Wilshire in downtown Los Angeles have been retrofitted to house vast floors of servers and the infrastructure to cool them (Vincent 2024).

2015) and on critical and creative thinking skills (Kuhlke et al. 2016), particularly in the face of the growing presence of AI-assisted tools in education settings (Larson et al. 2024).

In addition to employing this framework of "prospective theorizing" as a means of creating pathways toward unknown futures, this paper also employs a related approach of what Davies (2018) has called "economic science fictions." Davies defines "economic science fictions" (in the introduction to an edited volume of that title) as a kind of storytelling about the future that is "a political resource" because it "empowers the critic and the radical to see the present as amenable to conscious transformation" (Davies 2018: 16). The particularly economic piece of this kind of storytelling is in the idea of not only imagining a narrative future but proposing new structures for how societies are organized around value and exchange. Economic science fiction can be a strategy across many academic disciplines, all synthesized into stories. As it is used here, it is also a strategy for bridge-building across political valences and environments of thought. At a time when news stories about politics and markets are often fueled by an economic model that needs advertisement clicks, the prospect of imagining and building the future can be reduced to rage-bait, zero-sum reductive thinking, as if the largest creative frontiers of society can only be addressed by a debate team. Instead, the stories we want to tell about the future can give us common ground in shared case studies (Yin 2013) that anchor theory-building in shared reference points—in this case of Silverman and OpenAI. That case study sits in the larger context of speculative work by artists, curators, and organizations to pilot forms of distributive justice, whether cooperative economies (Schneider and Glickstein, forthcoming) or experiments in basic income (Acosta 2023).

Arts entrepreneurship (Chang and Wyszomirski 2015; Essig 2015a, 2015b; Taylor 2015; White 2015) informs the larger disciplinary methods by which we understand AI, including the modeling of entrepreneurship itself as an art form (Callander and Cummins 2021), and the separation of entrepreneurship from profit-seeking (Benz 2009), with more multiplicity of options relative to more canonical definitions of entrepreneurship (Shane, S., & Venkataraman 2000). Arts entrepreneurship offers particular resources as an effectual discipline (Callander 2019; Sarasvathy 2001), that is, one in which the reference points such as known markets are themselves changing.

Even with these rapidly evolving technological frontiers, the principles of economics and finance can still apply within this design framing. Sarasvathy (2001) describes effectuation as akin to cooking from a pantry instead of from a recipe. By that same token, we have a set of resources and ingredients with which to say that, if creative producers invest time and resources to make new work that then has value, it makes sense structurally that they would own upside in the value that they helped to create (Whitaker 2016). Yet, the formats by which they would do that are difficult to understand and require new attention in relation to technological processes and the possibility that existing models of entrepreneurial investment lack dimensionality for the task at hand. If creative producers own this upside, the question also arises as to whether they are taking risk together collectively, in

which case one would need to design both a format for collective ownership and for the design of decision-making rights—governance—over those proceeds. Digital-first initiatives such as decentralized autonomous organizations (DAOs) (Catlow and Rafferty 2022) offer models that complement a longer history of cooperative forms in the United States (Schneider 2018). Particularly given the economic structure of AI development—fixed cost intensive with potential tendencies toward natural monopoly, the design of regulation and policy generally (Wilkerson 2012) may be important modes of entrepreneurial thinking.

2. Field Scan

AI is a broader term for technology-driven intelligence, up to and including the idea that a computer can think in a quasi-sentient way, whereas machine learning (ML) is generally a more tactical idea of teaching a computer to perform analytic tasks. Computer vision is used to isolate the aspects of ML that focus on the analysis of images and capacity of computers to "read" visually (Stork 2024a, 2024b; Columbia Engineering n.d.). While AI may formally denote the capacity of computers to develop intelligence, that is, the ability not only to perform computational tasks but to learn, in this paper, I use AI as a holdall to encompass ML with a focus on the development of large language models (LLMs) that take vast fields of input data—text, number, image, structure. Within Jebara's (2004) distinction of generative and discriminative AI, I focus on the former, as it particularly dovetails with creative processes of content generation.

I focus more here on the question of computational models that can draw from a range of training data—including that created by artists and writers—in order to remix and produce new outputs. It is this aspect of AI which is the focus here for theory-building on how we model forms of value creation—of the original underlying content producers and the AI tools—with regard to evolving tests of existing U.S. copyright law and the possibilities of new models and frameworks for individual and collective ownership of these outputs. This focus informs our understanding of how we credit ownership, distribute decision-making rights, and design systems of governance and cooperative economics over creative work, especially given that creative work is both a form of production and of investment (Gerber 2017).

From a start-up investment standpoint, AI is a rapidly growing field. According to the Organisation for Economic Co-operation and Development (OECD), estimated venture-capital (VC) investment in AI rose from 5% of all VC investment in 2012 to 20% of all VC investment in 2020 (Tricot 2021; Berg et al. 2023). However, VC investment has not yet synced up to revenue. Goldman Sachs (2024) estimated that a trillion dollars of direct capital expenditure would be required across companies in order to develop AI. The investment bank's own economist, Joseph Briggs projected that generative AI "will ultimately automate 25% of all work tasks and raise U.S. productivity by 9% and GDP growth by 6.1%

cumulatively over the next decade" (Goldman Sachs 2024, p. 3). However, leading academic researchers cited in the same report estimated only a 0.5% increase in worker productivity and corresponding 0.9% increase in GDP growth (Acemoglu 2024; Goldman Sachs 2024).

One significant unknown is the required concurrent investment in public utilities given the substantial taxing of the power grid to service data centers for these technologies, costs which are not currently priced into these private investment calculations via economic tools such as emissions permits (Coase 1960) or via regulation and taxation. Researchers have also expressed skepticism about whether AI's infrastructure investment requirements are matched by foreseeable revenue. In a report for the VC firm Sequoia Capital, Cahn (2024) has used data about Nvidia, the company which makes graphics processing units (GPUs) used by many other AI companies, in order to back out assumptions for how much revenue the industry would need to make to justify the capital expenditures.[6] Cahn has found that, even with OpenAI's reportedly surpassing $1 billion annualized revenue in 2023 (Efrati and Holmes 2023) and $3.7 billion annualized revenue by the autumn of 2024 (Palazzolo and Woo 2024; Isaac and Griffith 2024), overall the industry would have needed to find $200 billion in additional revenue in 2023 (Cahn 2023) and $600 billion in the 2024 analysis (Cahn 2024)—a substantial gap between infrastructure buildout and demonstration of product use. These projects are arguably useful information in and of themselves and also a reminder of the methods of this paper, namely, the idea that the future is still in formation and that the model itself is still in creative flux.

A key related area of analysis has been projecting how much AI will affect worker productivity and the economy overall. Eloundou et al. (2023) estimate that LLMs could affect 10% of tasks for 80% of U.S. workers, or up to 50% of tasks for a more concentrated subset of 19% of workers, though the researchers explicitly do not commit to a timeframe on the adoption and therefore the impact of such models. Researchers have tried to identify which industries will be most heavily affected by AI (Felten et al. 2023, 2021). Peng et al. (2023) found that computer programmers completed an assigned task 55.8% faster when paired with an AI tool.[7]

While automation has traditionally focused on factory labor, researchers have studied the impact of AI on non-manufacturing labor. Noy and Zhang (2023) had college-educated workers complete writing and interpretive tasks ("incentivized writing tasks", e.g., writing press releases, short reports, or sensitive emails) with an experimental group

[6] Nvidia has a variety of products including the development of GPUs and related data centers which allow the computational power of AI. Nvidia was a partner in Refik Anadol's *Unsupervised* 2022-23 installation at the Museum of Modern Art, New York (MoMA, n.d.; Kuo et al. 2022).

[7] All programmers in the study had the same instructional material. The control group completed the task by themselves. The experimental group used Copilot, a GitHub tool that employs Codex, a generative tool made by OpenAI (Chen et al. 2021; Peng et al. 2023: p. 3). That task was to "implement an HTTP server in JavaScript as quickly as possible" (Peng et al. 2023: p. 3).

assigned to use ChatGPT. Relative to the control group, the group using ChatGPT on average completed the task 40% more quickly (saving 11 minutes on average time to completion of 27 minutes) and their output was rated as 18% better (as scored by external evaluators who rated originality as well as quality of both writing and content). Those participants who had performed best prior to the introduction of ChatGPT maintained the quality of their output while saving time, whereas those who had performed more weakly saw both an increase in quality and in time savings. This study shows the potential importance and benefit of ChatGPT, though it leaves open the questions of this paper, namely the crediting of those content creators whose work supports these gains in quality and productivity.

When we consider the extrapolation of these studies to the arts, we start to see a number of factors. First and foremost, the scale of the arts is very different from that of AI. The global art market—sales of art—is estimated at approximately $65 billion (McAndrew 2024). Apart from the scale of the art market per se, one can consider the input of creative work generally. Legal scholars have begun to weigh in on the role of AI. Carys (2024) has argued that copyright is an inadequate and limiting tool, though that view emphasizes the possibilities of AI companies over the economic inputs of artists. In an analysis of unfair competition of AI data scraping, Rouser (2024) argues that the data scraping AI companies conduct merits consideration under the Federal Trade Commission's unfair competition standards. Rouser also provides a broad literature review on the state of AI development as well as problematic racial bias in AI (Rouser 2024; Obermeyer et al. 2019).

AI has been used to create innumerable works of art. One notable example is the sale of the first AI-generated artwork at auction. In October 2018, Christie's auction house sold an artwork *Portrait of Edmond Belamy* by a French art collective called "Obvious" (Flynn 2018). The Obvious collective was made up of three students. To make the artwork, they used an algorithm that was created by Robbie Barrat, who had made the code in his spare time at the age of seventeen and who was nineteen by the time of the auction. Barrat created the algorithm by training it on thousands of artwork images that he trawled from Internet pages. Barrat posted the code to the repository Github, where the members of Obvious found it. An artwork that was estimated to sell for $10,000 sold for $432,500. Who should own the proceeds of that sale? In an interview, one of the members of Obvious, Hugo Caselles-Dupré, said that Obvious had not substantially modified Barrat's code but that they had put more substantial time and effort into working on the computer, with the code, to make the final artwork (Vincent 2018).

The field of AI has received substantial investment from VC firms and large companies such as Microsoft. The technologies are capital intensive to produce but have not yet seen demonstrated markets. However, the ability of users to see the outputs have led to consideration of who has consented to be in the training data. In addition, preliminary scholarly studies of productivity point to large-scale gains, even within computing. In the humanities and education, the use of AI had substantial impact on what work is made, how

people think, and how culture represents societies. AI has been demonstrated to show biases and to present substantial challenges to basic academic research protocols (e.g., informed consent). At the same time its economic model is unresolved. Particularly where creative work and research are concerned—forms of knowledge building—gains made by individuals and by society at large are privatized to AI companies without structures for shared ownership and governance.

3. Conceptual Framework

The case of Obvious collective's *Portrait of Edmond Belamy* encapsulates the complexity of economic models for AI. Artists—as a proxy for all creative workers—have always drawn from their surroundings and often from the work of specific people. For example, when the artist Shepard Fairey was sued by the Associated Press (AP) for using an underlying AP-owned photograph to make the iconic *Hope Poster,* for Barack Obama's 2008 presidential campaign (a project that Fairey, like Barrat, made on a volunteer basis in his free time), a group of leading intellectual property attorneys who represented Fairey pro bono cited the painter Paul Cezanne's use of a photograph underlying his painting *The Bather* (1895), which is owned by the Museum of Modern Art and considered a masterpiece within Cezanne's body of work (Fisher et al. 2012: 272, 332). How do we conceptualize the role of the photographer underlying the Cezanne painting? What is the framework for balancing the input of others as an organic part of creative process and finding structures and methods of sharing in upside for those whose work meaningfully helped to create value? While these questions have been active in creative disciplines for decades—with artists such as Andy Warhol or Richard Prince who engage with popular culture and methods of appropriation—the technology of AI creates a new scale to the problem.

Answering this question requires engagement with both the U.S. frame of economic incentives and the European framework of moral rights over one's own creation. This paper focuses primarily on the economic rights and the U.S. context of the case studies while acknowledging that AI produces a much larger and thornier said of questions about moral rights beyond art including rights to one's own voice or image.[8] The answer to this question needs in some way to undertake the especially difficult task of answering whether Barrat's algorithm is different from that of OpenAI. Does it matter that one is programmed by an individual—and a seventeen-year-old—and the other is a corporate effort that, as Silverman can attest, did not ask permission? Obvious quickly credited Barrat; as

[8] Scarlett Johansson threatened to sue OpenAI for a chat voice uncannily similar to her own (Allyn 2024). Rouser (2024) cites the case of two high school students who sued for infringement when their likeness was used as a recognizable input to AI-generated pornographic images (Harris, S. & Moshtaghian 2023). There are substantial issues with AI outside the scope of this paper including in policing and emergency response (NAACP n.d.; Feldkamp and Neusteter 2023) and in military contexts (Greenland 2023).

Silverman's lawsuit alleges, OpenAI did not retain the copyright information within the texts it scraped from the internet.

Silverman is a stand-up comic, performer, and author by background. She was a cast member of Saturday Night Live (1993-94) and the principal of *The Sarah Silverman Show* (2007-2010) in addition to acting in a variety of other works. She is the author of *Bedwetter,* an autobiography published in 2011. Her lawsuit against OpenAI was allowed to proceed in February 2024 on the grounds of direct copyright infringement.

Within this larger context, we can focus on the case study of Sarah Silverman's work and her case against OpenAI. If OpenAI's ChatGPT-3.5 model scraped over 300 billion words from publications found in the internet (Rouser 2024, Hughes 2023), we can contextualize Silverman's work within that field. As Chiang (2024) has written, creative work is defined by a series of choices—each word put down on the page, each brushstroke chosen. That choice has associated with it labor, skill, and intelligence. The labor is in the form of time spent, including by those who have used AI as inputs. The skill pertains to the AI model as well and its capacity to act based on past experience. Intelligence, as Chiang (2024) defines it, is the capacity to learn. Drawing on the methodological framework of this paper, intelligence is the capacity to synthesize and to move forward into untemplated circumstances—to risk creating value, that is, original work that may later go from opus to input.

In the U.S., copyright is governed by the Copyright Act of 1976 (U.S.C 1992), which codifies a ruling from the court case Folsom v. Marsh (1841). The U.S. Copyright Act evaluates "fair use"—meaning the use of another's creative work without infringement on their creative works—by a test of four factors:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.

These factors are particularly understood through the prism of a highly influential essay by Judge Pierre Leval (1990) in the *Harvard Law Review.* Leval defined the idea of "transformative use" as a synthesis of the fair use factors. This transformativeness is generally judged by judges, who are at times put in the position of being art connoisseurs or parsing the intentionality of testimony by artists (Adler 2016). As argued previously by Whitaker (2019), the fourth fair use factor is commonly described as a "market" test but is in fact written as a "potential market . . . or value" test. This shift from market to potential market and value allows the frame of imagining future constructs for AI. In addition, the

third fair-use factor—the portion of the work used—provides grounding for the initial challenge of answering who owns AI, which is the scale of use: one versus many.

Consider the "amount and substantiality" of the use of Silverman's *Bedwetter* by OpenAI's ChatGPT. One the one hand, OpenAI is using 100% of Silverman's book. On the other, that book is a small drop in the bucket of an estimated 300 billion words used to train GPT-3.5 (Hughes 2023). The kneejerk reaction is to think Silverman's work is such a small input that it does not matter. But this is not the case. Copyright exists from the creator's point of view, not only the user's. That is because the original logic of copyright is to grant individual economic incentive to create works that contribute to the public good—that "promote the Progress of Science and useful Arts" (U.S. Constitution). While there is no hard and fast rule as to what percentage of a work constitutes fair use, university libraries often guide the usage of less than 10 to 15% of a written work. Even though a 10% rule does not exist, suppose for the sake of argument that OpenAI is allowed to use 10% of Silverman's work and of any work by any other writer or other creative producer in the class of the prospective class-action lawsuit. We know that OpenAI used all of the work, whether the output shows all of the work or not. But what if they used all of it in the way someone—say, a professor—might read an entire book but then assign less than 10% of it to a course of college students? Imagine a scenario in which a user of ChatGPT makes the following requests of the AI tool:

(1) Summarize Silverman's work
(2) Recreate a complete version of *Bedwetter*
(3) Design a new work in the style of Bedwetter
(4) Combine *Bedwetter* with another work to create a new style

Under fair use, (1) AI is allowed to summarize the work, so long as it does not plagiarize and it cites sources. Citing sources would require OpenAI to include copyright information in its input files and in the way in which its algorithm is trained. Such a requirement, if required by law, would be a meaningful intervention. It is relatively clear that (2) recreating the complete version of *Bedwetter* is a violation of Silverman's copyright.[9] In the case of (3) a writer could read *Bedwetter* and write a memoir informed by Silverman's style without violating her copyright. At issue is the vast labor differential in a single individual reading a single book in a single lifetime and an AI algorithm ingesting hundreds of thousands of books. The case of (4) mimics questions in copyright scholarship about "remix" culture. It is hard to say how sampling and recombination are parsed by existing copyright law. The general principle proposed below does not circumvent the complexity of bringing individual cases of to court in particular circumstances.

[9] Readers may know the obscure and conceptual case of Borges' (1962) short story "Pierre Menard of the Quixote" in which an author happens to have recreated a section of *Don Quixote* of Cervantes verbatim, but this is a symbolic rather than structural comparison.

There is no claim to fair use under the third factor because the entire work is being used. Though the use of the entire work is mitigated in many cases by its small scale relative to the overall, the creative work still has dignity in its smallness the way that one vote still has dignity in a national election of millions. The fourth factor creates more analytic power and possibility for the analysis of AI. The "value" part of the fourth factor is not generally considered in legal cases of fair use. Judges tend to evaluate the existing market and whether the source artist's market is infringed. A whole-cloth change in lens, but maintaining of doctrine, would be to look instead at value and potential market. Value encapsulates the "added value" of a contribution. Thus the question becomes: How would the OpenAI algorithm change without the inclusion of Silverman's work? Perhaps this question is academic and in many cases Silverman's work would not affect the impact. However, if Silverman is emblematic of the class of all creators, if all creators left OpenAI, then the algorithm would not work at all. And, in some salient cases, a user might try to recreate Silverman's work. Given that she has not granted consent, this is a problem for which OpenAI is, in fact, arguably responsible.

Even traditional copyright law make space for the singularity of an individual's contribution. In the case Salinger v. Random House, Inc. (1987), the author J.D. Salinger suited over a biography that relied heavily on the novelist's unpublished letters. The lawsuit alleged overreliance on Salinger's "dazzling prose." It was as if the biographer were the machine relying on the content made by the individual creator. The author had not given consent; the letters were found files, not unlike manuscripts scraped from the Internet. The court upheld the author's right to some control over the use of his work out of its original—private—context.

To synthesize these problems of creator and tool—material and machine—with the place of the individual creator in the landscape, imagine as a framework is a 2 x 2 matrix in which we weight the nature of content creation—"material" against the role of an algorithm—"machine" on one axis. In the other axis, we can consider the logic of many and one—that is, whether the derivation of the material or the machine is the work of many or of one.

	Material	Machine
One	*Bedwetter,* work of an individual artist	Robbie Barrat's algorithm
Many	All work pulled into a training algorithm	OpenAI

This analysis of the part versus the whole is instructive for the economic logic of copyright. As argued previously by Whitaker (2019), fair use has been construed as having a zero-sum nature: Either a use is fair or it is not. The doctrine does not allow for economic complements to copyright and for ideas of shared ownership. Fair use exists in the one-

material box of work made by an individual creator. Of course that creator may have relied on many sources and influences. The creation of a machine or tool by a solo creator—for example, Barrat—merits special consideration because of the individuality of the creator. That said, Barrat placed his work in a public code repository, and the Obvious collective used it and made meaningful developments within it. We could consider something like Adobe Photoshop to be analogous to Barrat's algorithm. It is a machine that allows the realization of an artistic vision, a set of a tools used by a creator. OpenAI can be a set of tools used by a creator, but crucially it is trained on prior content whose origins must be considered in the "value" analysis of the work.

We can see a set of possibilities that center two things: the presence of individual artistic labor at all and the collective circumstance of all artistic labor. Each of those inputs matter. Again, like a vote in an election, it can be individually subtracted out without changing the overall, but if all of the votes were subtracted out, the election would not work. We have a sense of individual value—of the specificity of Silverman's and others' individual contributions—and we have the sense of the collective—the body politic of human creativity, which is the yardstick and the common resource that copyright exists to protect and incentivize in the first place.

4. Discussion and Implications

The technological level at which OpenAI operates makes clear that technology has moved far enough forward to allow the amalgamation of vast quantities of individual data. This technological promise is currently centralized under a single organization and under litigation from individual creators whose work is an input to that centrally owned machine. Models in the arts, from blockchain and from artists' cooperatives, show that it is possible for groups of creative workers to band together and own their own work. Although still speculative, we see these experiments in some blockchain-based experiments including the "invisible economy" of mutual support imagined by the founders of the art-making collective "DADA" (Franceschet and Read 2022) and the artists' collective Transfer Data Trust (Schneider and Glickstein, forthcoming) in which artists take care of and store back-up copies of each other's art and operate in some regards as an economic cooperative. Experimental art collectives are a much larger topic and area of extensive recent experimentation through decentralized autonomous organizations (DAOs) (Rafferty and Catlow 2022).

OpenAI itself embodies an ethos of art: Investment, without demonstration of success, or even certainty that a success is possible, following from an animating question, sense of purpose, and audacious goal. OpenAI's own corporate story acknowledges the tension between the need for concentrated capital investment to get the airplane of the idea off the ground and the reality that a whole host of actors share responsibility and credit for the success. The system by which OpenAI took investment is set up to credit a

lone corporate actor when a collective has created an important part of the underlying value. The idea of web3, which is associated with blockchain, could also characterize cooperative models that reflect the realities of shared risk-taking and collective efforts behind AI.

It would be theoretically possible for OpenAI to operate as both a private company and a cooperative of all of the inputs it trains on. It would need to cite its sources, that is, have it be possible to know whose input mattered. We have probabilistic systems of reverting rights—and revenues—to creators. Models include DACS, the resale royalty and copyright management system in the United Kingdom, and ASCAP and BMI which pay royalties to musicians and split the proceeds between artists and music publishers. What we do not have is the political will to shift from VC models of concentrated, privatized risk to public models in which the collective owns the proceeds of the collective's work. Individuals with special influence could receive an outsized portion, but even to credit the collective is to say that companies are privatizing public benefits, like the output of artists, writers, and other content creators.

We could make inroads to credit those systems with simple proposals that require companies like OpenAI to credit their inputs. They effectively need to pay for raw materials and to do so on an equity basis—that is, to pay a royalty for use rather than a fee for the input. Such a system recognizes the risk and flexibility needed to chart an unknown future. Artists do not have access to the same kind of capital investment as AI. We are only just beginning to center a meaningful conversation about the precarity of artistic labor (Roberts 2024) and the embeddedness of artists' lives in the need to make money in order to keep making creative work. Creativity that benefits all of society requires individual risk, and we need ways of mapping this and thinking about it structurally as both a problem of governance and of economic structuring.

Content creators have stared down blank pages and empty canvases, rearranged their working lives to have the flexibility to do so, taken on enormous and ongoing risk—even for those at the top of their creative fields—and contributed to a greater good in a way that, if they are performing at the very top of their field, they have probably made look easier than it was. If we wish collectively to incentivize that work, we need to enact—even in small and experimental ways—systems to distribute not only economic proceeds but also decision rights. OpenAI's nonprofit performs social benefit while reserving decision rights for a small and privately appointed group of directors. Instead, the proceeds associated with the creative work that trains the AI models needs to be governed more democratically—whether by government or by cooperatives of creative workers.

5. Conclusions

The lawsuits brought by creators against AI companies call for new ways of thinking simultaneously about economics as a creative endeavor itself—a design medium—and about

creative workers as members of a larger whole. That larger whole asks more than symbolic representation by the charitable aims of a private nonprofit. It asks—in a structural and not merely normative way—for us to consider the creation of value and to design economic models that are faithful representations of the entrepreneurial risk asked of all artists and creative works in their artistic practices.

To develop such systems is not to overlook or defensively react against the seismic changes brought on by AI itself. Those changes may deepen the work existing creators can do and expand and democratize access to creative labor more broadly. But this use of AI does not obviate the responsibility to engage in a meta-level creativity and entrepreneurship. Just because each of us is a small input to AI, doesn't mean we don't count. The invitation of AI is to design structures that can allow creators to benefit in upside they help to create, share risk they collectively face, and grant decision-making or governance rights in the ultimate generativity of generative AI—in allowing investment in the ongoing work of creative research and development that benefits us all.

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