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ANONYMITY, THE PRODUCTION OF GOODS, AND INSTITUTIONAL DESIGN

Jeffrey M. Skopek*

In this Article, I demonstrate that anonymity has been misconceived as an aspect of privacy, and that understanding this mistake reveals a powerful and underutilized set of legal tools for facilitating and controlling the production of information and other social “goods” (ranging from uncorrupted votes and campaign donations to tissue samples and funding for biomedical research). There are three core components to this analysis. First, I offer a taxonomic analysis of existing law, revealing that in areas ranging from contract and copyright to criminal law and constitutional law, the production of information and other goods is being targeted by three types of anonymity rules—rules that make anonymity and non-anonymity into rights, conditions of exercising rights, and most surprisingly, triggers that extinguish rights. Second, I propose a theory that makes sense of our law’s uses of these rules, identifying a cohesive set of functions that they perform across three phases in the production of a good: its creation, evaluation, and allocation. Third, I use my taxonomic and theoretical analysis to develop generally applicable lessons for the design of law and policy. Applying these lessons to a set of difficult and pressing questions concerning the production of specific biomedical and democratic goods, I demonstrate that they reveal innovative solutions that balance a wide variety of important and conflicting interests and concerns.

TABLE OF CONTENTS

INTRODUCTION.....	1752
I. A TAXONOMY OF ANONYMITY RULES	1757
A. <i>Entitlement Rules</i>	1759
1. Anonymity As a Right	1759
2. Attribution As a Right.....	1762
B. <i>Conditioning Rules</i>	1763

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1. Anonymity As a Condition	1763
2. Attribution As a Condition.....	1765
C. <i>Extinguishing Rules</i>	1767
1. Anonymity As a Trigger	1767
2. Attribution As a Trigger.....	1768
II. THEORY OF PRODUCTION	1771
A. <i>Creation</i>	1771
1. Autonomous Creation	1772
2. Controlled Creation.....	1774
B. <i>Evaluation</i>	1776
1. Evaluating the Good Itself	1777
2. Evaluating the Source or Recipient of the Good.....	1779
C. <i>Allocation</i>	1780
1. Efficient Allocation.....	1781
2. Fair Allocation	1784
III. IMPLICATIONS FOR LAW AND POLICY	1789
A. <i>The Production of Goods</i>	1790
1. Controlling Production.....	1790
2. Tailoring Production	1795
3. Balancing Production.....	1803
B. <i>The Production of Liberal Legal Subjects</i>	1806
CONCLUSION	1808

INTRODUCTION

In *Representative Government*, John Stuart Mill suggests that the ability to vote anonymously in political elections is a threat to democracy.¹ The problem with anonymous voting, Mill argues, is that it suggests to the elector “that the suffrage is given to him for himself; for his particular use and benefit, and not as a trust for the public.”² Against this view, Mill argues that the elector’s vote “is not a thing in which he has an option; it has no more to do with his personal wishes than the verdict of a juryman.”³ Rather, the voter’s choice “is strictly a matter of duty; he is bound to give it according to his best and most conscientious opinion of the public good.”⁴ Thus, “the duty of voting, like any other public duty, should be performed under the eye and criticism of the public,” such that the elector will “adhere to conduct of which at least some decent account can be given.”⁵

1. JOHN STUART MILL, *CONSIDERATIONS ON REPRESENTATIVE GOVERNMENT* 190 (London, Parker, Son & Bourn 1861).

2. *Id.* at 190.

3. *Id.* at 191–92.

4. *Id.* at 192.

5. *Id.* at 193, 200.

In an era in which the secret ballot is often taken as an integral part of a legitimate democracy,⁶ Mill's argument is striking for its very different understanding of the liberal legal subject that it presupposes. What interests me about this tension is that it is suggestive of how differently a democratic society might see the anonymity and identification of its citizens, how central these visions can be to its legal order, and how limited our understanding is of the role anonymity plays in our law today.

This is not to say that we know nothing about anonymity in our law. The right to anonymous communication under the First Amendment has been extensively explored,⁷ as has digital anonymity.⁸ There has been limited but important work done on the tension between secrecy and disclosure in constitutional law,⁹ the social norms that govern anonymous communication and their functions,¹⁰ and the desirability of anonymity as a tool of democratic governance.¹¹ There has also been significant attention paid to the technical question of whether and when "anonymization" of data is possible in practice.¹² However, this existing scholarship has not recognized the extent to which anonymity is used and regulated by rules in nearly every area of law—and more importantly, by rules whose primary purpose is not the protection of privacy.

For example, on Election Day 2012, 22 percent of registered voters shared how they voted on social networking sites such as Facebook or Twitter, often by posting photos of their ballots.¹³ In response to this new social media trend, election officials in some states provided public notice that this practice violated state election law, which gave rise to widespread public attention to these previously underpublicized restrictions.¹⁴ For

6. BRUCE ACKERMAN & IAN AYRES, *VOTING WITH DOLLARS: A NEW PARADIGM FOR CAMPAIGN FINANCE* 5–6 (2002).

7. *E.g.*, Lyrisa Barnett Lidsky & Thomas F. Cotter, *Authorship, Audiences, and Anonymous Speech*, 82 NOTRE DAME L. REV. 1537 (2007) (providing a detailed positive and normative analysis of the impact of allowing anonymous speech); Chesa Boudin, Note, *Publius and the Petition: Doe v. Reed and the History of Anonymous Speech*, 120 YALE L.J. 2140 (2011) (providing a history of anonymous speech in the United States). There has also been very limited attention to anonymity as a Fourth Amendment right. See Christopher Slobogin, *Public Privacy: Camera Surveillance of Public Places and the Right to Anonymity*, 72 MISS. L.J. 213 (2002).

8. *E.g.*, A. Michael Froomkin, *Anonymity in the Balance*, in *DIGITAL ANONYMITY AND THE LAW: TENSIONS AND DIMENSIONS* 5 (C. Nicoll et al. eds., 2003).

9. *E.g.*, Seth F. Kreimer, *Sunlight, Secrets, and Scarlet Letters: The Tension Between Privacy and Disclosure in Constitutional Law*, 140 U. PA. L. REV. 1 (1991).

10. *E.g.*, Saul Levmore, *The Anonymity Tool*, 144 U. PA. L. REV. 2191 (1996) (providing discursive analysis of social norms governing anonymous communication and their relevance to law).

11. *E.g.*, James A. Gardner, *Anonymity and Democratic Citizenship*, 19 WM. & MARY BILL RTS. J. 927 (2011).

12. *E.g.*, Paul M. Schwartz & Daniel J. Solove, *The PII Problem: Privacy and a New Concept of Personally Identifiable Information*, 86 N.Y.U. L. REV. 1814 (2011).

13. See Lee Rainie, *Social Media and Voting*, PEW RES. CENTER (Nov. 6, 2012), <http://pewinternet.org/Reports/2012/social-vote-2012.aspx>.

14. Julianne Pepitone, *Tweeted Your Ballot? You May Have Broken the Law*, CNN MONEY (Nov. 6, 2012, 4:36 PM), <http://money.cnn.com/2012/11/06/technology/mobile/photo-ballot-voting-law/index.html>. For an overview of these laws, see *State Law:*

although many people conceptualize anonymous voting as a right, it is in fact a requirement of some form in most states.¹⁵ In Minnesota, for example: “If a voter, after marking a ballot, shows it to anyone except as authorized by law, the election judges shall refuse to deposit the ballot in any ballot box and shall place it among the spoiled ballots.”¹⁶

In other contexts, anonymity is a right, but the implications of this right have not been fully appreciated. For example, in 1997, Harvard University revealed that, over the prior eight years, it had spent \$88 million anonymously acquiring 52.6 acres of land for a campus expansion, using a buying agent to avoid problems of holdout and strategic bargaining.¹⁷ While Harvard subsequently faced significant public criticism for doing so,¹⁸ this type of anonymous purchasing is facilitated by the law of agency, which generally allows an agent who enters into a contract on behalf of a principal to protect the anonymity of the principal—even by falsely representing that he is not acting on behalf of any principal.¹⁹

Finally, there are situations in which anonymity is neither a right nor a requirement, but rather a trigger that extinguishes rights. For example, in the early 1990s, members of the Havasupai Indian tribe donated blood for use in biomedical research at Arizona State University.²⁰ They did so on what they claim was the express understanding that their blood would only be used for diabetes research to which they wanted to contribute.²¹ When they later learned that their blood was also being used in other research to which they had ethical objections, they sued for the return of their blood and for damages related to the unconsented use.²² Although the legal merits of these claims were never decided because the parties settled,²³ the public controversy surrounding the case drew critical attention to the fact that under current federal regulations, a researcher can conduct research that

Documenting the Vote 2012, DIGITAL MEDIA L. PROJECT (Nov. 9, 2012), <http://www.dmlp.org/state-law-documenting-vote-2012>.

15. See *infra* notes 67–70 and accompanying text.

16. MINN. STAT. ANN. § 204C.17 (West 2009).

17. Sara Rimer, *Some Seeing Crimson at Harvard ‘Land Grab,’* N.Y. TIMES, June 17, 1997, at A16.

18. See *id.*

19. Doing so will generally only affect the enforceability of the contract if the principal or agent had notice that the third party would not have dealt with the principal. See 2 RESTATEMENT (THIRD) OF AGENCY § 6.11(4) cmt. d (2006). The implications of this right are significant. For instance, the case of Harvard suggests that the exercise of eminent domain for use by private parties may often be unnecessary to avoid problems of holdout and strategic bargaining, raising the question of whether the “public use” requirement for takings should be more restrictively interpreted. For an argument that it should, see Daniel B. Kelly, *The “Public Use” Requirement in Eminent Domain Law: A Rationale Based on Secret Purchases and Private Influence*, 92 CORNELL L. REV. 1 (2006).

20. See generally Katherine Drabiak-Syed, *Lessons From Havasupai Tribe v. Arizona State University Board of Regents: Recognizing Group, Cultural, and Dignitary Harms As Legitimate Risks Warranting Integration into Research Practice*, 6 J. HEALTH & BIOMEDICAL L. 175 (2010).

21. *Id.* at 175.

22. *Id.* at 185–97.

23. *Id.* at 175.

violates the scope of a research participant's specific consent merely by anonymizing the tissue or blood sample that he or she donated.²⁴

These varied uses of anonymity in our law—as a requirement in voting, as a right when purchasing land, and as a trigger that extinguishes rights in biomedical research—may appear to be unrelated. But my argument in this Article is that they are in fact all part of a cohesive and previously unrecognized class of legal interventions that use anonymity not to protect privacy, but rather to facilitate and control the production and circulation of information and other social “goods.”²⁵ These interventions are pervasive, stretching from contract and copyright to criminal law and constitutional law.

Our failure to recognize this class of rules derives from the misconception of anonymity as a mere tool or aspect of privacy.²⁶ This conflation has obscured an important factual difference between the two conditions: under the condition of privacy, we have knowledge of a person's identity, but not of an associated personal fact, whereas under the condition of anonymity, we have knowledge of a personal fact, but not of the associated person's identity. In this sense, privacy and anonymity are flip sides of each other. And for this reason, they can often function in opposite ways: whereas privacy often hides facts about someone whose identity is known by *removing* information and other goods associated with the person from public circulation, anonymity often hides the identity of someone about whom facts are known for the purpose of *putting such goods into* public circulation.²⁷ This Article explores, explains, and draws lessons about this function of anonymity.

Part I demonstrates that anonymity plays a pervasive role in the production of goods across our law. Approaching our law taxonomically, I identify three distinct and pervasive ways in which production is facilitated and controlled by rules that regulate either anonymity or “non-anonymity” (which, in the interest of simplicity, I will refer to as “attribution”). The

24. *Id.* at 199–200.

25. While some of the “goods” that I will discuss can be characterized as informational (e.g., political speech, tips to the police, information provided as part of bounty schemes, and the personal data protected by Health Insurance Portability and Accountability Act), many of them cannot (e.g., sperm, organs, campaign donations, artwork, and the type of identity protected by a tort claim for misappropriation of identity), and for others this would be an incomplete or forced characterization (e.g., votes, tissue for biomedical research, copyrighted works, purchase offers, and electioneering communications).

26. For example, one can find suggestions that anonymity is one of several types of privacy. *E.g.*, Ruth Gavison, *Privacy and the Limits of Law*, 89 *YALE L.J.* 421, 433 (1980); Slobogin, *supra* note 7, at 233–66; Alan F. Westin, *Science, Privacy, and Freedom: Issues and Proposals for the 1970's: Part I—The Current Impact of Surveillance on Privacy*, 66 *COLUM. L. REV.* 1003, 1021 (1966). Others suggest that anonymity is the perfect realization of privacy. *E.g.*, Shawn C. Helms, *Translating Privacy Values with Technology*, 7 *B.U. J. SCI. & TECH. L.* 288, 300–01 (2001); *see also* Ian Lloyd, *Privacy, Anonymity and the Internet*, *ELECTRONIC J. COMP. L.*, Mar. 2009, at 1. Still others see it as a tool of privacy. *E.g.*, Lawrence Lessig, *Reading the Constitution in Cyberspace*, 45 *EMORY L.J.* 869, 876 (1996).

27. I explore this distinction in more detail in a companion article tentatively titled *Reasonable Expectations of Anonymity*.

first are rules that protect a *right* of anonymity or attribution, which I term “entitlement rules.” The second are rules that require anonymity or attribution as a *condition* of exercising a right or capacity, which I term “conditioning rules.” The third, and most surprising, are rules under which anonymity or attribution is a trigger that *extinguishes* a right or capacity, which I term “extinguishing rules.” In revealing the depth of these three categories of rules across our law—in domains including, but not limited to, contract, copyright, tort, property, criminal law, election law, and constitutional law—I arrive at the questions of whether there is any coherence to their use, what specific functions they perform, and how they operate.

Part II proposes a theory that makes sense of our law’s uses of these rules, identifying a cohesive set of functions that they perform. In developing this theory, I differentiate between three phases in the production of goods—between three types of actions that our law might seek to incentivize or control. First, there are the actions that make the good available to members of the public for the first time, which I will refer to as the “creation” of the good. Second, there are actions that interpret or draw inferences from a good, which I will refer to as the “evaluation” of the good. Third, there are actions that alter who possesses and controls the use of a good, which I will refer to as the “allocation” of the good. Having framed production in this way, I argue that the seemingly opposite anonymity and attribution versions of each category of rule often serve common functions. Specifically, I argue that they are both used by our law to shape the costs and benefits of *creating* goods in order to align private production incentives with public goals and values, control information flows in order to address *evaluation* costs associated with using goods, and reallocate rights of control over goods in order to achieve their efficient or fair *allocation*. In identifying these functions, I do not take a position on whether they justify our law as a normative matter. Rather, I advance a descriptive and explanatory argument about how the rules work in order to better understand the functions that they perform in our law.

Part III demonstrates that my taxonomic and theoretical analysis not only identifies and explains the pervasive role of anonymity in our law for the first time, but also reveals new solutions to difficult questions of law and policy. It does so by providing a framework of previously unrecognized “design levers.”²⁸ These levers include the six types of rules that I identify in my taxonomic analysis, and the three phases of production that I identify in my theoretical analysis. In this Part, I draw on these levers in developing generally applicable lessons for the design of institutions that seek to incentivize or control the production of goods. I also demonstrate that these lessons reveal innovative solutions to difficult and pressing questions concerning the production of specific political and biomedical goods.

28. On the concept of design levers, see, for example, Yochai Benkler, *Law, Policy, and Cooperation*, in *GOVERNMENT AND MARKETS: TOWARD A NEW THEORY OF REGULATION* 299, 312–23 (Edward J. Balleisen & David A. Moss eds., 2010).

These include the questions of how to manage financial conflicts of interest in academic research that is intended to provide the basis for public policy (a problem highlighted by inquiries into the financial crisis of 2008), and how to allocate control over human tissue samples in research biobanks (the resolution of which will significantly shape the future of medicine). In conclusion, after demonstrating these practical applications of my analysis, I turn briefly to the relationship between anonymity and democracy with which this introduction begins, exploring how seemingly equivalent solutions to a given problem of production may in fact embody competing conceptions of the proper rights and capacities of the subjects of a liberal democracy.

I. A TAXONOMY OF ANONYMITY RULES

In this Part, I develop a taxonomic analysis of existing law that identifies three distinct and pervasive ways in which the production of goods is facilitated and controlled by “anonymity rules”—by which I mean rules that regulate either anonymity or attribution. Specifically, I identify and differentiate between rules that treat anonymity or attribution as a *right* (entitlement rules), a *condition* of exercising a right or capacity (conditioning rules), and a trigger that *extinguishes* a right or capacity (extinguishing rules). In short, there are six core types of rules, which can be represented as follows:

	Anonymity	Attribution
Entitlement Rule	Anonymity is a right.	Attribution is a right.
Conditioning Rule	Anonymity is a condition of exercising a right or capacity.	Attribution is a condition of exercising a right or capacity.
Extinguishing Rule	Anonymity extinguishes a right or capacity.	Attribution extinguishes a right or capacity.

It is important to note that I propose these categories on instrumental and not formal grounds, suggesting only that they provide a useful way of thinking about this previously unexplored legal space. Further, the distinction that I draw between conditioning rules and extinguishing rules is subtle at times, for whenever anonymity or attribution extinguishes a right, it could be said that the opposite was a condition of having that right. What makes them different, however, is the surprising role that adversity plays in extinguishing rules. Under these rules, an adverse party is able to trigger the loss of one’s rights by imposing anonymity or attribution, which is different—in a way that is legally and normatively significant—from

merely failing to meet a condition of anonymity or attribution in order to exercise a right.²⁹

In what follows, I will survey the many anonymity and attribution rules in our law that fall into my taxonomy but that have never been characterized in these terms. My primary aim in doing so is to substantiate my claim that anonymity, unlike privacy, plays a crucial role in facilitating and controlling the production and public circulation of goods. I will show that it does so across our law, in domains including, but not limited to, contract, property, tort, copyright, criminal law, election law, and constitutional law.³⁰ In addition, this analysis suggests that we are using these rules in unreflective, untailed, and unsystematic ways, and that important policy choices are being made without awareness of the tacit theories of production that they embody.

Before I turn to this analysis, however, I must briefly clarify four features of anonymity, as the concept is often misunderstood.³¹ First, it is crucial to recognize that anonymity is never perfect: everything that we consider to be anonymous will contain some information that eliminates the majority of individuals in the world from the group of potential sources.³² Second, the degree to which something is anonymous can depend on context, including the knowledge of the person seeing it.³³ Third, the quantity of identifying information associated with something that is anonymous is rarely fixed, in that more information will often be available at some additional cost or effort.³⁴ Fourth, anonymity encompasses pseudonymity, as all cases of pseudonymity can be mapped onto the anonymity continuum: there are

29. This character of extinguishing rules is also shared with rules in other areas of law, such as the rule of adverse possession. See Thomas W. Merrill, *Property Rules, Liability Rules, and Adverse Possession*, 79 Nw. U. L. REV. 1122, 1123 (1984) (explaining adverse possession). While adverse possession could logically be characterized as a subrule in a “conditioning rule” that sets out the criteria for having a property right (which includes the condition that there be no successful adverse possessors), there are legal and normative reasons to conceptualize adverse possession as also being something distinct from this.

30. While my core focus in this Part is positive cases of each type of rule, I also highlight some cases where the rules are absent, as this negative legal space in the taxonomy creates legal relationships that can be equally valuable in institutional design. Cf. Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions As Applied in Judicial Reasoning*, 23 YALE L.J. 16, 42 (1913) (arguing that the absence of a right creates a legal relationship).

31. I draw here on David Post’s helpful work on this topic. See David G. Post, *Pooling Intellectual Capital: Thoughts on Anonymity, Pseudonymity, and Limited Liability in Cyberspace*, 1996 U. CHI. LEGAL F. 139, 148–152.

32. For example, an anonymous hospital record will inform us of when and where the person was treated and what treatments they received. Likewise, anonymous graffiti on a subway platform will inform us that its source was physically present on that particular platform at some point during the period since the platform was last painted. *Id.* at 149 n.26.

33. For example, if I know the name of a person who is the only person to have received a rare medical treatment at a given hospital, I will be able to attach a name to his medical record. Or, if I know the name of the only person who entered the subway platform after it was painted, I will be able to identify the source of the graffiti.

34. To access this information, we might need to contact third parties, such as persons familiar with the number of times a given procedure has been performed at a hospital. Or, we might need techniques that allow us to access information that is available on the anonymous object, such as fingerprints left in the paint of the graffiti. *Id.* at 150.

cases in which pseudonymity does not differ from strong anonymity,³⁵ and cases in which it conveys some identifying information like weak anonymity.³⁶ The ability of anonymity (and pseudonymity) to perform the legal functions that I will identify in this Article will turn on the extent of its unavoidable contextual incompleteness.

A. Entitlement Rules

In this section, I will begin my taxonomic analysis of our law with a survey of the wide variety of rules that provide anonymity or attribution entitlements.

1. Anonymity As a Right

The right to purchase and receive a good or service anonymously is perhaps the most pervasive anonymity entitlement, having its foundations in numerous sources of law. At times, these sources define the right narrowly. For example, there are state laws that expressly allow for the purchase of specific types of goods anonymously.³⁷ Other forms of the right apply more generally. For example, the law of agency generally allows an agent who enters into a contract on behalf of a principal to falsely represent that he is not acting on behalf of any principal, thereby creating a right to contract anonymously.³⁸

Contract can also give rise to anonymity rights, one of the most common being the right of sperm donors to anonymous genetic parenthood. This right is generally created in the first instance by private law—by the donor’s contract or by the recipient’s contract with the bank—of which donors have been found to be third-party beneficiaries.³⁹ But the right may

35. For example, a book might be labeled “anonymous” because the author is unknown; or it might be labeled “anonymous” because the author chose this as his pseudonym. In fact, in an early recorded use of the word “anonymous” by Pliny the Elder, it is a description and a name: “Anonymos, finding no name to be called by, got thereupon the name Anonymos.” PLINY, *THE HISTORIE OF THE WORLD: COMMONLY CALLED, THE NATURALL HISTORIE OF C. PLINIUS SECUNDUS* 274 (Philemon Holland trans., London, Adam Islip 1601). Further, there would be little difference between either of these situations and a situation in which an author published each of his novels under different unrelated pseudonyms. Post, *supra* note 31, at 152.

36. When the same person uses a pseudonym more than once, the name begins to serve identifying functions. It conveys that the source of one thing is the same as the source of another, and in this way, allows for the aggregation of certain data about that source. Further, what makes pseudonymity distinct from anonymity, and a subset, is that whereas the anonymity continuum is the result of the aggregation of various types of identifying information, the pseudonymity continuum is the result of one specific type of aggregation—namely, aggregation of things identified with a given name. I return to this point in Part III, showing that this type of anonymity can serve unique and useful functions.

37. For example, there are five states that allow the anonymous purchase of lottery tickets: Delaware, Kansas, Maryland, North Dakota, and Ohio. There are also laws and doctrines that indirectly facilitate anonymous purchasing, such as the first sale doctrine in copyright. Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 *UCLA L. REV.* 889, 896 & nn.29–30 (2011).

38. See *supra* note 19 and accompanying text.

39. *E.g.*, *Johnson v. Superior Court*, 95 Cal. Rptr. 2d 864, 873 (Ct. App. 2000).

also have public law components. For example, a donor might have a state statutory right not to be named as a parent on a birth certificate.⁴⁰ Or, more fundamentally, the right to create and enforce donor anonymity contracts might have a basis in the right to procreate recognized by the Constitution,⁴¹ or the privacy and anonymity rights recognized by some state constitutions.⁴²

Another very different public law right to anonymous “paternity” comes from the Visual Artists Rights Act of 1990⁴³ (VARA), which recognizes the so-called “moral right of paternity,” or “right of attribution,” of authors of qualifying works of visual art to keep the works physically anonymous.⁴⁴ This unusual right appears to be the only way, other than a copyright or a privacy interest, for authors to prevent *truthful* attribution of their work—at least by a private party.⁴⁵ While an author of an anonymous or pseudonymous work could in theory try to prevent attributed publication

40. *E.g.*, *In re Roberto d.B.*, 923 A.2d 115 (Md. 2007). However, state statutes might also cut the other way. For example, several states currently have statutes permitting donor-conceived children to de-anonymize their donor based on a satisfactory showing of “‘good cause’ or similar standard.” Marsha Garrison, *Law Making for Baby Making: An Interpretive Approach to the Determination of Legal Parentage*, 113 HARV. L. REV. 835, 898–99 (2000) (quoting Lori B. Andrews & Nanette Elster, *Adoption, Reproductive Technologies, and Genetic Information*, 8 HEALTH MATRIX 125, 138 (1998)).

41. *See* I. Glenn Cohen, *Regulating Reproduction: The Problem with Best Interests*, 96 MINN. L. REV. 423, 513–17 (2011). This right could take two forms: a donor could have a right to procreate by donating anonymous sperm; or perhaps more likely, a recipient could have a right to procreate using anonymous sperm.

42. In one of the few cases involving a challenge to a donor anonymity contract, the California Court of Appeal held that the state constitution protected the donor’s right of privacy in both his “medical history” and his “identity.” *See Johnson*, 95 Cal. Rptr. 2d at 876. While the court ultimately found that the state had stronger interests than the donor in the disclosure of his *medical history*, it directed the trial court to craft an order such that the donor’s *identity* would “remain undisclosed to the fullest extent possible,” thereby protecting his anonymity. *Id.*

43. Pub. L. No. 101-650, §§ 601–610, 104 Stat. 5089, 5128–33 (1990) (codified as amended in scattered sections of 17 U.S.C.).

44. *See* 17 U.S.C. § 106A(a)(1)–(2) (2012) (defining the right of attribution). Although at least one commentator has suggested that the right of attribution does not include a negative right to publish anonymously or pseudonymously, *see, e.g.*, Roberta Rosenthal Kwall, *Authors in Disguise: Why the Visual Artists Rights Act Got It Wrong*, 2007 UTAH L. REV. 741, 745 n.20, the authoritative comments to the Berne Treaty (which VARA was implementing) state that it does, *see* WORLD INTELLECTUAL PROP. ORG., GUIDE TO THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS (PARIS ACT, 1971) 41 (1978), as does the Congressional House Report, *see* H.R. REP. NO. 101-514, at 14 (1990), *reprinted in* 1990 U.S.C.C.A.N. 6915, 6924, as do multiple courts of appeals in dicta. *See* *Kelley v. Chi. Park Dist.*, 635 F.3d 290, 296–97, 306 (7th Cir. 2011) (discussing the Second Circuit case *Carter v. Helmsley-Spear, Inc.*, 71 F.3d 77, 81 (2d Cir. 1995), and the First Circuit case *Phillips v. Pembroke Real Estate, Inc.*, 459 F.3d 128 (1st Cir. 2006)).

45. If the attribution is false, an author might have a cause of action for misappropriation of identity or right of publicity, *see* R. David Grant, *Rights of Privacy—An Analytical Model for the Negative Rights of Attribution*, 1992 UTAH L. REV. 529, 554–63, or for libel or unfair competition. *See* Thomas F. Cotter, *Pragmatism, Economics, and the Droit Moral*, 76 N.C. L. REV. 1, 15–16 (1997).

under a tort theory of misappropriation of identity or right of publicity, it appears that no author has ever done so successfully.⁴⁶

With respect to the government, however, the story is quite different, as the U.S. Supreme Court has held that “an author’s decision to remain anonymous . . . is an aspect of the freedom of speech protected by the First Amendment.”⁴⁷ However, the complete scope of this anonymity right is not entirely clear. For example, it is unclear whether it is merely a negative right against compelled disclosure, or an affirmative right to conceal oneself.⁴⁸ Nor is the right absolute. For example, if an anonymous speaker is sued for defamation, the plaintiff may have the right to a subpoena requiring disclosure of the speaker’s identity.⁴⁹

Finally, there are the many statutory anonymity rights given in return for speech. Various federal bounty schemes provide permanent or temporary anonymity rights in exchange for information;⁵⁰ and in exchange for testimony, federal and state witness protection programs provide one of the only anonymity-pseudonymity rights backed by criminal penalties.⁵¹ The latter right is generally even valid against parties who have legal claims against the witness,⁵² though not against the noncustodial parents of the witness’s children (the rights of parents being a theme that comes up in various places in the taxonomy).⁵³

46. One of the few courts to address this issue held that the right of publicity did not allow an author of a pseudonymous book to prevent a publisher from using his real name when it had the right to publish the book pseudonymously. *Ellis v. Hurst*, 121 N.Y.S. 438 (Sup. Ct. 1910).

47. *McIntyre v. Ohio Elections Comm’n*, 514 U.S. 334, 342 (1995). This is just one of many Supreme Court cases to recognize the right. *See Boudin, supra* note 7, at 2164–68 (surveying cases).

48. The Second Circuit has ruled “the concealment of one’s face while demonstrating” is not constitutionally protected. *Church of Am. Knights of the Ku Klux Klan v. Kerik*, 356 F.3d 197, 209 (2d Cir. 2004). It is also unclear whether it includes a right to read and listen, as well as speak and associate. For an argument that it does, see Catherine Crump, Note, *Data Retention: Privacy, Anonymity, and Accountability Online*, 56 STAN. L. REV. 191, 217 (2003).

49. Currently, courts use one of four standards to decide. *See Lyriisa Barnett Lidsky, Anonymity in Cyberspace: What Can We Learn from John Doe?*, 50 B.C. L. REV. 1373, 1373–76 (2009).

50. *See generally* Marsha J. Ferziger & Daniel G. Currell, *Snitching for Dollars: The Economics and Public Policy of Federal Civil Bounty Programs*, 1999 U. ILL. L. REV. 1141, 1201–07 (providing an overview of IRS, U.S. Customs and Border Patrol, and SEC programs and the False Claims Act).

51. *See generally* 18 U.S.C. §§ 3521–3528 (2012).

52. For example, a creditor’s inability to find a protected witness does not constitute an unconstitutional taking of his property. *Melo-Tone Vending, Inc. v. United States*, 666 F.2d 687, 689 (1st Cir. 1981). However, if the protected witness is under investigation, arrested, or charged for certain offenses, the U.S. attorney general must disclose his identity and location. *See* 18 U.S.C. § 3521(b)(1)(G).

53. Parents have a constitutional due process right to notice and a hearing on the relocation. *See Joan Comparet-Cassani, Balancing the Anonymity of Threatened Witnesses Versus a Defendant’s Right of Confrontation: The Waiver Doctrine After Alvarado*, 39 SAN DIEGO L. REV. 1165, 1208 (2002).

2. Attribution As a Right

Perhaps one of the most frequently discussed rights of non-anonymity—or attribution—is the general right of attribution of authors, which is widely recognized by the copyright law of most Western nations.⁵⁴ While U.S. copyright law does not recognize such a general right, two acts grant it in limited forms. First is VARA, which provides authors of a narrowly defined class of artwork with a right to require truthful attribution of those works.⁵⁵ Second is the Digital Millennium Copyright Act (DMCA), which makes it illegal—in a limited set of situations—to intentionally alter or remove from a copyrighted work “any copyright management information,” which includes the “name of, and other identifying information about” the author of the work.⁵⁶ It was once thought that the Lanham Federal Trademarks Act also provided the basis for a limited right of attribution,⁵⁷ but the Supreme Court has since clarified that it does not,⁵⁸ so to go beyond VARA and the DMCA, an author of a copyrighted work will need to contract for the right as part of a licensing agreement.⁵⁹

Along with creative works, one might have a right of attribution in one’s children. A woman giving birth generally has the right to be named on the child’s birth record pursuant to hospital and state recording procedures, as does her husband if she is married.⁶⁰ Otherwise, a man has the right to be named if the woman consents, or if he successfully brings a paternity suit in court.⁶¹ Further, if the woman giving birth is a gestational surrogate, the genetic or legal parents might have a superseding right to be named instead.⁶² This right can derive from an ex post court order based on

54. Linda J. Lacey, *Of Bread and Roses and Copyrights*, 1989 DUKE L.J. 1532, 1549; see also Jane C. Ginsburg, *The Right to Claim Authorship in U.S. Copyright and Trademarks Law*, 41 HOUS. L. REV. 263, 265 (2004).

55. 17 U.S.C. § 106A(a)(1)–(2). Some state statutes provide additional attribution rights. Lacey, *supra* note 54, at 1550 nn.92–94.

56. 17 U.S.C. § 1202(b)–(c). This text suggests that an author who includes his name as part of the copyright management information will have a limited right of attribution. Jane C. Ginsburg, *Moral Rights in the U.S.: Still in Need of a Guardian Ad Litem*, 30 CARDOZO ARTS & ENT. L.J. 73, 74–79 (2012). However, there is conflicting case law. Edward L. Carter, *Copyright Ownership of Online News: Cultivating a Transformation Ethos in America’s Emerging Statutory Attribution Right*, 16 COMM. L. & POL’Y 161, 183–88 (2011).

57. E.g., Rebecca Tushnet, *Naming Rights: Attribution and Law*, 2007 UTAH L. REV. 789, 791; Ginsburg, *supra* note 54, at 265–66.

58. See *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23, 33–34 (2003).

59. There are, however, several limits to using copyright as the basis for a contractual right of attribution. See Ginsburg, *supra* note 54, at 280.

60. Karen Czapanskiy, *Volunteers and Draftees: The Struggle for Parental Equality*, 38 UCLA L. REV. 1415, 1425–28 (1990); Steven Snyder & Mary Byrn, *The Use of Prebirth Parentage Orders in Surrogacy Proceedings*, 39 FAM. L.Q. 633, 636–37 (2005).

61. Czapanskiy, *supra* note 60, at 1425.

62. See, e.g., *In re Roberto d.B.*, 923 A.2d 115, 127–33 (Md. 2007); *Culliton v. Beth Isr. Deaconess Med. Ctr.*, 756 N.E.2d 1133, 1139–41 (Mass. 2001).

genetic analysis,⁶³ or in a few states, from a prebirth court order based on the consent of the parties.⁶⁴

B. Conditioning Rules

Having surveyed the many rules that grant an entitlement in anonymity or attribution, I will now turn to the rules that require anonymity or attribution as a condition of exercising a right or capacity, thereby controlling key inputs in production decisions. Like other types of second-order rules, such as liability and inalienability rules, these conditioning rules should be seen not as limiting the exercise of already-allocated rights and capacities, but rather as constitutive of them.⁶⁵

1. Anonymity As a Condition

The nearly universal use of the secret ballot in general elections is perhaps the most readily identifiable example of anonymity as a condition of exercising a right.⁶⁶ While it is rare for a court to expressly hold that the secret ballot is a requirement rather than a right,⁶⁷ or for a state to prohibit voters from showing their completed ballot to anyone in the polling station,⁶⁸ anonymity is nevertheless imposed in the sense that most states invalidate ballots that are marked in a way that could identify the voter,⁶⁹ and many prohibit taking a photo of one's ballot inside a polling place.⁷⁰ Thus, it is generally impossible for a voter to prove how he or she voted.

Anonymity is, at times, also a condition of being a juror. For example, in grand jury proceedings, Federal Rule of Criminal Procedure 6(e)(2) covers

63. Leslie Bender, *Genes, Parents, and Assisted Reproductive Technologies: ARTs, Mistakes, Sex, Race, & Law*, 12 COLUM. J. GENDER & L. 1, 37–39 (2003) (listing cases).

64. See UNIF. PARENTAGE ACT §§ 801–803 (amended 2002), 9B U.L.A. 362–64 (2001 & Supp. 2013).

65. For example, as Madeline Morris has noted,

[T]he view that liability and inalienability rules do not fully protect entitlements (and the presumable corollary, that only property rules can fully honor entitlements) rests on a flaw in Calabresi and Melamed's analysis. The three rules do not protect and define the transferability of an already-allocated entitlement; rather, the rules themselves constitute the particular entitlement.

Madeline Morris, *The Structure of Entitlements*, 78 CORNELL L. REV. 822, 843 (1992).

66. See generally Boudin, *supra* note 7, at 2160.

67. *But see* Nabors v. Manglona, 829 F.2d 902, 905 (9th Cir. 1987) (holding that ballots marked with code names not only posed a problem of fraud, but also threatened the rights of those who choose not to participate in the fraud, as their votes become more identifiable); McCavitt v. Registrars of Voters, 434 N.E.2d 620, 631 (Mass. 1982) (“[T]he right to a secret ballot is not an individual right which may be waived by a good faith voter.”).

68. *But see* MINN. STAT. ANN. § 204C.17 (West 2009) (“If a voter, after marking a ballot, shows it to anyone except as authorized by law, the election judges shall refuse to deposit the ballot in any ballot box and shall place it among the spoiled ballots.”). It is more common for a state to allow disclosure. See Kenneth R. Mayer, *Political Realities and Unintended Consequences: Why Campaign Finance Reform Is Too Important To Be Left to the Lawyers*, 37 U. RICH. L. REV. 1069, 1087 (2003).

69. Mayer, *supra* note 68, at 1087.

70. For an overview of state laws on using cameras inside polling places, see *State Law: Documenting the Vote 2012*, *supra* note 14.

“the anonymity of grand jurors,”⁷¹ and in civil and criminal trials, courts may in special circumstances impose anonymity on jurors (as well as their votes).⁷²

Outside the responsibilities and capacities of public citizenship, anonymity is at times imposed on parties in market transactions that relate to the provision of public services. For example, the California Public Utilities Commission allows the Pacific Gas and Electric Company (PG&E) to engage in over-the-counter transactions in natural gas-related derivatives and financial instruments with its customers or affiliates, but requires that it use a broker so that the “transactions are anonymous.”⁷³ This prevents PG&E from “directly and intentionally impact[ing] a particular customer, which could have anticompetitive impacts if PG&E enters into contracts with counterparties.”⁷⁴

In the private realm, anonymity may also, at times, be imposed as a condition of exercising certain aspects of self-determination—such as one’s ability to control the disposition of one’s organs upon death. Although rarely discussed in these terms, anonymity is a de facto condition imposed by laws that prohibit directed donations of cadaveric organs.⁷⁵ While such prohibitions are currently rare in the United States,⁷⁶ they have not always been so,⁷⁷ and these prohibitions are strictly imposed in many European

71. *In re Am. Historical Ass’n*, 49 F. Supp. 2d 274, 282–83 (S.D.N.Y. 1999). Although Rule 6(e)(2) does not specify the scope of “matters occurring before the grand jury,” courts have construed the phrase to include any item that would reveal the identities of grand jury members. Roger A. Fairfax Jr., *Grand Jury Discretion and Constitutional Design*, 93 CORNELL L. REV. 703, 748 (2008); Brian L. Porto, Annotation, *What Are “Matters Occurring Before Grand Jury” Within Prohibition of Rule 6(e) of Federal Rules of Criminal Procedure*, 154 A.L.R. FED. 385, 403, 405, 418 (1999). Grand juries also can be seen as protecting the *anonymity of the sources* of the evidence presented to them, and thereby performing the intermediary function proposed by Saul Levmore in his work on anonymity as a tool of communication. See Wendy J. Gordon, *Norms of Communication and Commodification*, 144 U. PA. L. REV. 2321, 2324 (1996).

72. Courts have held that an anonymous jury is proper “where the jury needs protection from external sources and where reasonable precautions to minimize any prejudicial effects of an anonymous jury on the defendant are taken.” William D. Bremer, Annotation, *Propriety of Using Anonymous Juries in State Criminal Cases*, 60 A.L.R. 5TH 39, 39 (1998) (discussing the use of anonymous juries in state criminal cases); see also G.M. Buechlein, Annotation, *Propriety of, and Procedure for, Ordering Names and Identities of Jurors To Be Withheld from Accused in Federal Criminal Trial—“Anonymous Juries,”* 93 A.L.R. FED. 135, 138–39 (1989).

73. *In re Pac. Gas & Elec. Co.*, 85 Cal. Pub. Util. Rep. 2d (PUR) 540, 1999 WL 667575, at *1 (Cal. P.U.C. 1999).

74. *Id.* at *2.

75. Such laws may be implemented to prevent the sale of organs, ensure that organs are allocated efficiently (to those with the greatest need), and guarantee fair access to a limited resource. Antonia J. Cronin & James F. Douglas, *Directed and Conditional Deceased Donor Organ Donations: Laws and Misconceptions*, 18 MED. L. REV. 275, 276 (2010).

76. Directed donations are now expressly permitted under federal regulations, 42 C.F.R. § 121.8(h) (2013), as well as by the versions of the Uniform Anatomical Gift Act adopted by many states, REVISED ANATOMICAL GIFT ACT § 11(a)(2) (amended 2006), 8A U.L.A. 109 (Supp. 2013); UNIF. ANATOMICAL GIFT ACT § 6(a)(3) (amended 1987), 8A U.L.A. 54 (2003).

77. Until recently, Vermont had such a restriction. Alexandra K. Glazier & Scott Sasjack, *Should It Be Illicit To Solicit? A Legal Analysis of Policy Options To Regulate Solicitation of Organs for Transplant*, 17 HEALTH MATRIX 63, 95 n.165 (2007).

jurisdictions, including the United Kingdom and France.⁷⁸ In addition, anonymity might be a condition of maintaining certain types of private rights. For example, failure to remain anonymous when pursuing a claim in court (or other activity that requires disclosure of certain facts about oneself) might preclude one from bringing an invasion of privacy claim based on the broadcast of the private facts revealed.⁷⁹

Finally, it is worth highlighting an anonymity condition that is not currently imposed but has been proposed. As I discuss in more detail in Part IV, Ian Ayres, Bruce Ackerman, and Jeremy Bulow have proposed that we address problems of quid pro quo political corruption by imposing anonymity on campaign contributions, much like we impose it on voting.⁸⁰ Under current law, however, we use the opposite type of conditioning rule to solve this problem—a rule to which I will now turn.

2. Attribution As a Condition

Under federal election law, a variety of modes of supporting a candidate for office are subject to attribution requirements. A candidate or committee that receives “an anonymous cash contribution in excess of \$50 shall promptly dispose of the amount over \$50.”⁸¹ And attribution is required for all electioneering communications made by any person and for all public communications made by a person or political committee soliciting contributions or advocating the election or defeat of a candidate.⁸²

Attribution is also a condition for several types of voting. The votes of legislators in Congress are public and recorded for posterity.⁸³ The identities of citizens who “vote” by signing referendum petitions may be subject to disclosure under state public records acts.⁸⁴ And except in the special circumstances noted above and in courts-martial,⁸⁵ the votes of jurors (who must themselves be identified) must be attributed when a polling is requested.⁸⁶

78. In France, it is a criminal offense to breach this anonymity in either direction. Joan L. McGregor & Frédérique Dreifuss-Netter, *France and the United States: The Legal and Ethical Differences in Assisted Reproductive Technology (ART)*, 26 *MED. & L.* 117, 124 (2007); see also Cronin & Douglas, *supra* note 75, at 275–76 (discussing assisted reproductive technology in the United Kingdom).

79. Cf. *Green v. CBS Broad., Inc.*, 3:98-CV-2740-T, 2000 WL 33243748, at *11 (N.D. Tex. Dec. 19, 2000).

80. See, e.g., ACKERMAN & AYRES, *supra* note 6; Ian Ayres & Jeremy Bulow, *The Donation Booth: Mandating Donor Anonymity To Disrupt the Market for Political Influence*, 50 *STAN. L. REV.* 837 (1998).

81. 11 C.F.R. § 110.4 (2013).

82. *Id.* § 110.11.

83. RULES OF THE HOUSE OF REPRESENTATIVES, 113th Cong., R. III (2013), available at <http://clerk.house.gov/legislative/house-rules.pdf>.

84. The Supreme Court has held that such a disclosure requirement does not on its face violate a citizen’s First Amendment anonymity rights, see *Doe v. Reed*, 130 S. Ct. 2811, 2821 (2010), but has left open the possibility of an as-applied challenge. See generally Boudin, *supra* note 7.

85. On mandatory secret voting in courts-martial, see Stephen A. Lamb, *The Court-Martial Panel Selection Process: A Critical Analysis*, 137 *MIL. L. REV.* 103, 127 (1992).

86. See generally Bremer, *supra* note 72.

Many other participants in the judicial and criminal justice system must also be identified. In general, pleadings must include a caption with the parties' names,⁸⁷ actions must be prosecuted in the name of the real party in interest,⁸⁸ and witnesses must be identified.⁸⁹ And the last requirement has echoes upstream in criminal law. For example, courts have generally held that an anonymously provided tip to the police cannot *by itself* give rise to reasonable suspicion for an investigatory stop or probable cause for a search warrant.⁹⁰

Attribution is also required for some private law causes of action. For example, courts have generally held that a person can only have a right of publicity in a pseudonym if the general public identifies the pseudonym with that person.⁹¹ So under these cases, an author who creates a pseudonymous blog in which he develops a distinctive, publicly recognizable persona but without true attribution (i.e., without anyone knowing his real identity) would not have a claim.⁹² The same is generally true for the related claim of misappropriation of name or likeness.⁹³ Note

87. FED. R. CIV. P. 10(a).

88. *Id.* R. 17(a). In special circumstances, however, parties have a right to anonymity or pseudonymity. Two broad categories of interests have been considered sufficient to justify anonymity or pseudonymity: (1) ensuring that claims are advanced or crimes prosecuted, *see, e.g.*, *Doe v. Advanced Textile Corp.*, 214 F.3d 1058, 1067–68 (9th Cir. 2000); and (2) protecting privacy interests, especially of victims and children. *See, e.g.*, *In re Baby M*, 537 A.2d 1227 (N.J. 1988). Lior Strahilevitz has proposed radically different criteria, arguing that the right to proceed pseudonymously should be contingent on factors including the novelty of the issues presented, the access of the parties to bully pulpits, the parties' legal sophistication, the magnitude of their injuries, and the reputational stakes for all those involved. *See generally* Lior Jacob Strahilevitz, *Pseudonymous Litigation*, 77 U. CHI. L. REV. 1239 (2010).

89. *See* Comparet-Cassani, *supra* note 53, at 1168. This requirement is not absolute, and it is possible that someone who has been threatened or attacked by a defendant will be given the right to testify anonymously.

90. Eric C. Surette, Annotation, *Sufficiency of Information Provided by Anonymous Informant To Provide Probable Cause for Federal Search Warrant—Cases Decided After Illinois v. Gates*, 462 U.S. 213, 103 S. Ct. 2317, 76 L.Ed.2d 527 (1983), 178 A.L.R. FED. 487, 495 (2002); *see also* 68 AM. JUR. 2D *Searches and Seizures* § 132 (2010).

91. For example, in *McFarland v. Miller*, the Third Circuit held that the plaintiff could hold a right of publicity in his nickname, "Spanky McFarland," if he could demonstrate that the name was "so associated with him as to be indistinguishable from him in public perception." *McFarland v. Miller*, 14 F.3d 912, 914 (3d Cir. 1994). Likewise, in a fascinating opinion worth brief mention, the Sixth Circuit held that Johnny Carson had a right of publicity in the name "Here's Johnny," explaining that "there was an appropriation of Carson's identity without using his 'name[.]'" and even more noteworthy, that "there would have been *no violation* of his right of publicity" if his real name had been used. *Carson v. Here's Johnny Portable Toilets, Inc.*, 698 F.2d 831, 837 (6th Cir. 1983) (emphasis added); *see also* *Ackerman v. Ferry*, No. B143751, 2002 WL 31506931, at *18–19 (Cal. Ct. App. Nov. 12, 2002); *Hirsch v. S.C. Johnson & Son, Inc.*, 280 N.W.2d 129, 137 (Wis. 1979).

92. *Cf.* Eric Etheridge, *The Outing of Publius*, N.Y. TIMES (June 8, 2009, 5:09 PM), opinionator.blogs.nytimes.com/2009/06/08/the-outing-of-publius/?_r=0 (discussing pseudonymous blogging).

93. *See, e.g.*, *Faegre & Benson, LLP v. Purdy*, 367 F. Supp. 2d 1238, 1248 (D. Minn. 2005) (involving a misappropriation of identity claim against a defendant who had used a pseudonym associated with the plaintiff on a satirical blog making fun of the plaintiff); *see also* *McFarland*, 14 F.3d at 914 (rejecting a privacy-based claim); *Jaggard v. R.H. Macy & Co.*, 26 N.Y.S.2d 829, 830 (Sup. Ct. 1941) (explaining that the state statute protecting the

that this rule is the inverse of the one requiring that a fact be anonymous or unknown to bring a standard invasion of privacy claim⁹⁴ (from which the right of publicity and misappropriation of identity torts derived).⁹⁵

Finally, in a wide variety of private transactions, ranging from telemarketing to the sale of publicly traded stocks by company insiders, identity disclosure is required.⁹⁶

C. Extinguishing Rules

Turning now to the final category of rules, I will survey the ways in which our law extinguishes rights and capacities on the basis of anonymity and attribution. As noted earlier, these rules are similar to conditioning rules in that whenever anonymity or attribution extinguishes a right, it could be said that the opposite is a condition of having that right. What makes them different and surprising, however, is the role of adversity. Under extinguishing rules, a potentially adverse party is able to trigger the loss of one's rights by imposing anonymity or attribution.

1. Anonymity As a Trigger

Perhaps the most salient rule where imposed anonymization extinguishes a right arises in the context of the "Common Rule" regime that governs all human-subjects research that is conducted, supported, or otherwise subject to regulation by the federal government.⁹⁷ In general, this regime requires informed consent for all research involving human subjects, including research using the subjects' biological tissue and associated data.⁹⁸ However, research is exempt from this requirement if the tissue or data is de-identified.⁹⁹ Consequently, anonymization extinguishes a subject's right to withhold consent, and allows for research that breaches the limits imposed by prior consent.¹⁰⁰

A similar logic underlies numerous other federal and state statutes and regulations. For example, a variety of state laws declare that genetic information is the "unique" or "exclusive" property of the individual to

right of privacy in one's name does not apply to partnership names, corporate names, or names adopted for business purposes).

94. *See supra* note 79 and accompanying text.

95. 4 DAN B. DOBBS ET AL., *THE LAW OF TORTS* § 740 (2d ed. 2011).

96. 15 U.S.C. § 6102(a)(1) (2012) (telemarketing); *see also* 15 U.S.C. § 80b-2(a)(11) (investment advisors to hedge funds).

97. 45 C.F.R. § 46.101(a) (2013).

98. *Id.* §§ 46.102(f), 46.116.

99. *Id.* §§ 46.101(b)(4), 46.102(f).

100. In fact, anonymization has been found to constitute an alternative to providing a right to withdraw. *See, e.g.*, *Wash. Univ. v. Catalona*, 437 F. Supp. 2d 985, 999 (E.D. Mo. 2006). A similar rule is in place in other countries. *See Stefan Eriksson & Gert Helgesson, Potential Harms, Anonymization, and the Right To Withdraw Consent to Biobank Research*, 13 EUR. J. HUM. GENETICS 1071, 1073–74 (2005).

whom the information pertains,¹⁰¹ but the laws contain exemptions for anonymous research where the identity of the individual will not be released.¹⁰² Anonymization likewise defeats one's rights against disclosure of personal information under the Freedom of Information Act,¹⁰³ the Privacy Act of 1974,¹⁰⁴ and the Health Insurance Portability and Accountability Act.¹⁰⁵ Anonymization also appears to generally trump one's interests in preventing anonymization.¹⁰⁶

Even the imposed *ability* to be anonymous might defeat some rights or capacities. For example, in *Singleton v. Wulff*,¹⁰⁷ the Supreme Court addressed the question of whether a group of doctors had third-party standing to claim that Medicaid's exclusion of most abortion services violated their patients' constitutional rights.¹⁰⁸ The Court held that they did, in part based on its determination that a woman's desire to protect her privacy may deter her from bringing suit herself.¹⁰⁹ However, Justice Lewis Powell, in dissent, argued that the ability of a woman to sue anonymously under a pseudonym defeated any privacy-based justification for allowing her interests to be represented by a third party.¹¹⁰ While this position did not become law, I highlight it to mark out the negative space in the taxonomy (i.e., the extinguishing rules that might be, but are not), which is important to recognize but often difficult to see and illustrate.

2. Attribution As a Trigger

Forensic DNA databanks, like research biobanks, are governed by an extinguishing rule; but here the triggering event is not anonymization, but rather identification. In a series of cases addressing the question of whether the unconsented seizure and banking of the DNA of inmates and parolees violates the Fourth Amendment, federal courts of appeal have adopted an extinguishing rule in holding that it does not. They have explained that

101. Sonia M. Suter, *Disentangling Privacy from Property: Toward a Deeper Understanding of Genetic Privacy*, 72 GEO. WASH. L. REV. 737, 744 n.27 (2003) (citing Colorado, Florida, Georgia, and Louisiana statutes).

102. See, e.g., OR. REV. STAT. ANN. §§ 192.531–.549 (West 2007); N.J. STAT. ANN. §§ 10:5-43 to -49 (West 2013).

103. *ACLU v. Dep't of Def.*, 543 F.3d 59, 85 (2d Cir. 2008) (noting that the parties cited no case “in which a court has found a privacy right to be at risk where identifying information has been adequately redacted”).

104. See 5 U.S.C. § 552a(b)(1)–(12) (2012).

105. De-identified data is not included in the privacy rule's definition of “protected health information.” M. B. Kapp, *Ethical and Legal Issues in Research Involving Human Subjects: Do You Want a Piece of Me?*, 59 J. CLINICAL PATHOLOGY 335, 338 (2006).

106. However, one court to address the issue with respect to the Gramm-Leach-Bliley Act has suggested that one might have an interest in preventing anonymization, explaining that “whether there is a privacy interest in the release of a set of aggregate data is a different question from whether consumers have a privacy interest in the initial use of their nonpublic personal information for the creation of aggregate data.” *Individual Reference Servs. Grp., Inc. v. FTC*, 145 F. Supp. 2d 6, 38 (D.D.C. 2001).

107. 428 U.S. 106 (1976).

108. *Id.* at 108.

109. *Id.* at 108, 117.

110. *Id.* at 126 (Powell, J., dissenting).

because the identities of these people are already known to the state as actual or potential criminal offenders, they have no right of privacy in their identities, and therefore no right of privacy in the identifying information derived from banking their DNA.¹¹¹

While the law is unclear, it is possible that sperm donors' rights not to be the legal parents of the children produced with their sperm are also subject to this type of extinguishing rule. No court has directly addressed this possibility, but they have addressed the opposite sides of the relevant issues in discussing a related conditioning rule. In *C.O. v. W.S.*,¹¹² for example, an Ohio court addressed the question of whether a plaintiff who had donated sperm to a lesbian couple, on the understanding that he could be involved in the child's life, could assert legal paternity over the child when the mother attempted to end his involvement on the basis of Ohio's nonspousal artificial insemination statute.¹¹³ The court held that the "complete circumvention by the donor and recipient of the critical element of anonymity" negated the mother's "attempts to cloak her pregnancy under the ambit of the non-spousal artificial insemination law," and thus the donor was a legal parent of the child.¹¹⁴ While this holding leaves open the question of whether the court would also have ruled the same way if the positions were reversed (i.e., if a donor were claiming a right to not be a legal parent) or if attribution was not consensual, the court's logic suggests that entangling the donor in the life of a child could extinguish his right to not be a legal parent should he try to claim it.

* * *

To summarize, what the above analysis shows is that across nearly every area of law anonymity and attribution rules are being used to facilitate and control the production of goods, and that they are doing so in ways that have not before been recognized. This raises the question of whether there is any coherence to our uses of these rules—of why we have them, what functions they perform, and how they operate. It is to these questions that I turn in the next Part. Before doing so, however, I offer a table that briefly summarizes the six core types of rules that I have identified and some of the situations in which they often apply, stated simply and without the many qualifications and limitations identified above:

111. *See, e.g.*, *United States v. Kincade*, 379 F.3d 813, 837 (9th Cir. 2004) ("[T]he DNA profile derived from the defendant's blood sample establishes only a record of the defendant's identity . . . in which the qualified offender can claim no right of privacy."); *see also* *United States v. Conley*, 453 F.3d 674, 680 (6th Cir. 2006) (same); *Jones v. Murray*, 962 F.2d 302, 306 (4th Cir. 1992).

112. 639 N.E.2d 523 (Ohio Ct. Com. Pl. 1994).

113. *Id.* at 524.

114. *Id.* at 525. Many other courts have also taken non-anonymity to be a relevant consideration. *See, e.g.*, *In re R.C.*, 775 P.2d 27, 33–35 (Colo. 1989); *Thomas S. v. Robin Y.*, 209 A.D.2d 298, 306 (N.Y. App. Div. 1994); *McIntyre v. Crouch*, 780 P.2d 239, 241 (Or. Ct. App. 1989); *Ferguson v. McKiernan*, 940 A.2d 1236, 1250 (Pa. 2007) (Eakin, J., dissenting).

	Anonymity	Attribution
Entitlement Rules	<p>There are rules that grant anonymity rights when:</p> <ul style="list-style-type: none"> • creating a contract using an agent • purchasing specified products • donating sperm for in vitro fertilization • creating artwork with certain characteristics • engaging in free speech • providing information as part of state and federal bounty schemes and witness protection programs • participating in the judicial system (as a party, witness, or juror) in special circumstances 	<p>There are rules that grant attribution rights when:</p> <ul style="list-style-type: none"> • creating artwork with certain characteristics • creating copyrighted works in some circumstances[†] • giving birth to children
Conditioning Rules	<p>There are rules that make anonymity a condition of:</p> <ul style="list-style-type: none"> • voting in a general election • serving as a grand juror or regular juror in special circumstances • engaging in market transactions in heavily regulated industries • maintaining a tort claim for invasion of privacy • donating an organ[†] 	<p>There are rules that make attribution a condition of:</p> <ul style="list-style-type: none"> • donating money to a politician • engaging in various forms of speech related to elections • voting as an elected official • signing a legislative petition • participating in the judicial system (as a party, witness, or juror) • providing a tip to the police that itself constitutes probable cause • having a tort claim for misappropriation of identity • engaging in various regulated private market transactions
Extinguishing Rules	<p>There are rules under which anonymity extinguishes rights to:</p> <ul style="list-style-type: none"> • limit research using one's biological tissue and data through informed consent requirements • prevent the disclosure and use of personal information otherwise protected by privacy laws • challenge the unconsented anonymization of personal data 	<p>There are rules under which attribution extinguishes rights to:</p> <ul style="list-style-type: none"> • prevent the government from seizing one's genetic material for use in forensic DNA databanks • avoid being a legal parent by virtue of being a sperm donor[†]

[†] This is a case in which the rule is unclear or unusual.

II. THEORY OF PRODUCTION

Having proposed and populated a taxonomy of anonymity and attribution rules that have not previously been identified or categorized as such, I will in this Part explore why we have these rules, what functions they perform, and whether there is coherence across disparate domains of law. My central argument is that these rules do perform a cohesive set of functions, which I identify and explain with a theory of production.

In developing this theory, I differentiate between three phases in the production of goods—between three types of actions that our law might seek to incentivize or control. First, there are actions that make a good available to members of the public for the first time, which I refer to as the “creation” phase of production. Examples of this could include writing a pamphlet that conveys information about political candidates or donating tissue for use at a research university. Second, there are actions that interpret or draw inferences from a good, which I refer to as the “evaluation” phase. Continuing with my previous examples, this could include judging the truthfulness of information contained in the political pamphlet and drawing conclusions from the data contained in the tissue sample. Third, there are actions that alter who possesses and controls the use of a good, which I will refer to as the “allocation” phase. This could include allowing a reader of the pamphlet to use it in an unintended way and allowing a university to distribute a tissue sample beyond the scope of the donor’s consent.

Using this framing of “production,” I demonstrate that across each of these three phases—creation, evaluation, and allocation—the seemingly opposite anonymity and attribution versions of each category of rule serve common functions. Specifically, I argue they both shape the costs and benefits of *creating* goods in order to align private production incentives with public goals and values, control information flows in order to address *evaluation* costs associated with using goods, and reallocate rights of control over goods in order to achieve their efficient or fair *allocation*. In identifying these functions, I do not take a position on whether they justify our law as a normative matter. Rather, I advance a descriptive and explanatory argument about how the rules work in order to better understand the functions that they perform in our law.¹¹⁵

A. Creation

The first phase of production is the creation of the good—the actions that make the good available to members of the public for the first time. In exploring the functions that anonymity and attribution rules perform here, I will argue that both provide a way of altering the internalization and externalization of the costs and benefits of creation in order to align private production incentives with public goals and values. These goals and values

115. In doing so, however, I implicitly reveal a set of previously unrecognized design levers that can be used to develop innovative solutions to difficult problems of production, which I demonstrate in Part III.

may include welfare maximization, in which case the rules would be used to force the complete internalization of these costs and benefits (or an outcome-equivalent allocation);¹¹⁶ or distributional fairness, in which case the rules would be used to achieve an alternate allocation. The substance of these goals, however, is not my focus. Rather, I am interested in how these goals are achieved by entitlement rules and conditioning rules.¹¹⁷ What I show is that each modifies production incentives in a different way: entitlement rules *create* incentives by allowing the entitlement holder to alter the costs and benefits of creating a good, whereas conditioning rules *control* incentives by either preventing or allowing public rewards and sanctions.¹¹⁸ In advancing this argument, I focus on how the rules modify *external incentives*, and how they impact those *whose identity is at issue*, setting aside the further questions of how anonymity might function as an intrinsic incentive, and how one might be impacted by the anonymity of a third party.¹¹⁹

1. Autonomous Creation

Entitlement rules allow a private party, the entitlement holder, to alter the allocation of the costs and benefits of creating a good, thereby incentivizing autonomous creation in one of two ways.

First, the rules allow the entitlement holder to internalize some of the benefits of a good that would, without the rights, be externalized—an intervention that is particularly important when the creation of a desired good will involve many internalized costs. Take, for example, a copper company that, through extensive investments in aerial surveys, discovers

116. This may or may not involve actually achieving complete internalization of costs and benefits, as the result could be achieved with imperfect internalization of both.

117. Extinguishing rules might also impact creation, but this seems to often be an unintended side effect. *See infra* Part II.C.

118. In allocating the costs and benefits of creation, both entitlement and conditioning rules generally act on private, decentralized incentive structures, and this is central to a subsidiary function: encouraging or controlling the creation of goods efficiently. This function can be clearly seen in the case of anonymity and attribution rights, where efficiency is achieved by cheaply removing factors that would disrupt an actor's private incentives to create a good. The right to anonymous speech, for example, is cheaper and easier to administer than many other ways of deterring or punishing retaliation against actors who would, absent retaliation, provide socially useful speech (and may also be more normatively desirable than trying to make illegal all forms of potential retaliation). On this efficiency rationale, the case for granting an anonymity right is stronger when the sanctions are legal and difficult to prevent (as is the case with many social sanctions) and weaker when the sanctions are illegal and easy to detect. The same is true of anonymity and attribution conditions. The requirement that campaign contributions be publicly attributed, for example, allows the public (rather than the government alone) to police corruption, placing the issue in the hands of voters who can hold representatives and donors accountable for any money trails that they do not like. *See Buckley v. Valeo*, 424 U.S. 1, 67–68 (1976) (*per curiam*). Likewise, requiring that votes be anonymous may be cheaper than other forms of public oversight to prevent corruption in elections. In these ways, entitlement and conditioning rules can be seen as quasi-private solutions to public goods problems.

119. For example, third-party anonymity might allow for anonymous retribution that would impact one's decision to publicly circulate a good.

copper deposits in land that it does not own.¹²⁰ If the copper company did not have the ability to buy this land anonymously or pseudonymously through an agent, the benefit of its investments might become externalized: the seller of the land might infer that there are copper deposits on the land and thus raise his price significantly. Ex ante, such a rule would not only strip nonowners—those with expertise—of an incentive to invest in developing information about others' property, but also reduce owners' incentives to correctly identify the attributes of their own property by giving them the possibility of free riding on the work of the experts.¹²¹ Thus, granting a right of anonymity helps ensure that both owners and potential buyers of property have incentives to invest, thereby increasing the likelihood that the full value of the property will materialize. In addition, the anonymity right helps solve a related externalities problem that arises when a prospective buyer is trying to assemble and redevelop land held by many parties.¹²² By helping hide this fact from the sellers, the anonymity right helps solve a strategic holdout problem that would reduce the developer's incentives to invest in a project that would benefit all of the parties.¹²³

Second, entitlement rules encourage autonomous creation by allowing a party to externalize some of the costs of a good that would, without the rights, be internalized. This function is particularly important to properly aligning incentives when the party will not be able to internalize all the external benefits. Take, for example, a whistleblower who provides information about a company that results in harm to that company. In general, she will not receive many of the benefits of the information she provides. However, if she does not have the ability to provide the information anonymously, the company will be able to impose sanctions on her.¹²⁴ Ex ante, such a rule would disincentivize whistleblowers from providing damaging information, even if it were socially desirable. An anonymity right solves this by allowing the whistleblower to reallocate the costs of creation: it allows her to avoid internalizing the cost of sanctions, forcing the company to bear the costs that derive from its inability to prevent the circulation of the information that she provides, in order to serve a broader public good.¹²⁵

120. Cf. Anthony T. Kronman, *Mistake, Disclosure, Information, and the Law of Contracts*, 7 J. LEGAL STUD. 1, 20–21 (1978).

121. *Id.* at 16.

122. Kelly, *supra* note 19, at 18–25.

123. *Id.*; see also Lee Anne Fennell, *Common Interest Tragedies*, 98 NW. U. L. REV. 907, 928–29 (2004) (discussing externalities created by holdouts).

124. In other cases, the costs of production addressed by anonymity rules might include reputational harm (such as ostracism for breaching a social norm or shame when a sensitive condition is revealed), damage to relationships (such as when one's action betrays or disappoints friends or family), exposure to demands for further action (such as when one provides a good or service for which others then want more and various further costs if one fails to comply with the demands), and loss of ability to perform certain roles.

125. Following a similar logic, we might *limit* rights of anonymity to *discourage* acts for which the actor would receive third-party sanctions. For example, as discussed in the

In these two ways, entitlement rules may generally be expected to cause an increase in the production of the given good to which they apply.¹²⁶ It is important to note, however, that there will be exceptions to this, as the rules do not merely allocate existing costs and benefits, but can also create new ones. For simplicity, I will continue to focus on the anonymity side of the story, but the same lesson applies to attribution. There are three possibilities worth flagging. The first is that the creation of an anonymity right will cause a decrease in production, causing someone who would have produced a good to no longer do so—for example, by changing the meaning of production in a way that “crowds out” the original motivating incentive.¹²⁷ Second, the creation of the right may not cause an *increase* in production, but rather a *shift* from attributed to anonymous production—an outcome that can be expected for those who were previously willing to act openly, but would have preferred to act anonymously. When this occurs, the production gains from granting the anonymity right will need to be discounted by the value, if any, of this lost identity information. At the same time, however, the creation of an anonymity right may create new incentives for *attributed* production—an outcome that is most likely when most parties choose to exercise their anonymity rights, making some recipients willing to pay a premium for attributed goods.¹²⁸ In this case, the discount in the second scenario must be reversed accordingly. Thus, case-specific evaluations of potential feedback effects must always accompany the use of these rules.

2. Controlled Creation

While entitlement rules allow private parties to choose if and how an external incentive will shape their creation of a good, conditioning rules limit their autonomy in this regard. They control creation by serving as a gatekeeper, either allowing or preventing feedback such as public rewards and sanctions.

taxonomy, the law allows for the de-anonymization of persons sued for defamation. *See supra* note 49 and accompanying text.

126. While I have focused on the anonymity side of the story for the sake of simplicity, the same can be said of attribution. For example, the right of attribution allows parties to capitalize on investment in their reputations, which also play a crucial role in the efficient operation of markets. *See* Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 618–20 (1984). On the reward functions of attribution generally, *see* Catherine L. Fisk, *Credit Where It's Due: The Law and Norms of Attribution*, 95 GEO. L.J. 49, 53–60 (2006).

127. For example, allowing people to donate to charity anonymously might reduce the benefits of open donation by making it appear self-serving. On “motivation crowding,” *see* Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing As a Modality of Economic Production*, 114 YALE L.J. 273, 321–28 (2004) (providing a critical overview of the literature), and Bruno S. Frey & Reto Jegen, *Motivation Crowding Theory*, 15 J. ECON. SURVEYS 589 (2001).

128. We see something like this with the “true name” and “real name” cultures of some online communities. *See* Lisa P. Ramsey, *Brandjacking on Social Networks: Trademark Infringement by Impersonation of Markholders*, 58 BUFF. L. REV. 851, 863–64 (2010).

Anonymity conditions, for example, are useful when we think that the possibility of feedback will allocate the costs and benefits of the good in a way that undermines its public value. For example, in general elections, anonymity is generally required to ensure that a voter will not be accountable to anyone but himself for the content of his vote. By making it impossible for third parties to verify the content of one's vote *ex post*, the anonymity requirement makes it unlikely that someone would devote resources to trying to buy or coerce votes, or that a voter would succumb to coercion or be able to find a buyer for his vote. Thus, anonymity prevents the voter and the potential vote buyer from reallocating the costs and benefits of voting (transferring some of the benefit that the vote provides to the candidate back to the voter) in a way that is against the public interest. A similar logic can justify requiring anonymity for organ donations, campaign contributions, jurors (in the special circumstances identified above), and grand jurors.¹²⁹ Although not always framed in these terms, these examples can be seen—following the logic of the taxonomy—as cases in which anonymity is useful as a way of preventing the relevant actors from being improperly influenced by undesirable feedback.

Conversely, attribution conditions are useful when we think that the possibility of rewards or sanctions will allocate the costs and benefits in a way that is desirable—when allowing unaccountable anonymous creation will be harmful. For example, the right of anonymous speech is revoked, and attribution is imposed, when a speaker engages in defamation.¹³⁰ By creating the possibility for accountability and sanctions *ex post*, the attribution rule leads to self-regulation *ex ante* in which the social costs are in effect internalized into creation decisions. The same is true of the attribution requirements for legislative votes, campaign donations, and juror votes: the requirements make it less likely that a legislator will sell her vote, that a donor will give (or political candidate accept) money motivated by illicit purposes, or that a juror will go along with the majority but then secretly vote with the minority.¹³¹

In these two ways, anonymity and attribution conditions limit the autonomy of the actor creating the good—and this is what I take to be their core function. However, it is important to briefly note that imposing anonymity or attribution can actually incentivize production that might not

129. The grand jury, for example, is “meant to operate in secrecy and to be *unaccountable*—if not to the community, then certainly to the governmental structure. Indeed, these features of the American grand jury were part of its original design.” Fairfax, *supra* note 71, at 749 (emphasis added).

130. See *supra* note 49 and accompanying text.

131. When the members of a jury know that their votes will not be identified, anonymity may be the source of suboptimal deliberation, as a juror may pretend to go along with the majority to avoid lengthy discussion but then secretly vote with the minority. Jon Elster, *Publicity and Secrecy in Jury Proceedings* 16 (n.d.) (unpublished manuscript), available at http://www.college-de-france.fr/media/jon-elster/UPL31840_Elster_PUBLICITY_AND_SECRECY_IN_JURIES_bis.pdf; see also Gardner, *supra* note 11, at 932; Adrian Vermeule, *Open-Secret Voting* 6–7 (Harvard Law Sch. Pub. Law & Legal Theory Working Paper Series, Paper No. 10-37, 2010), available at <http://ssrn.com/abstract=1646435>.

occur under a regime that merely allows them, and thus they might be autonomy enhancing in a limited set of cases. There are a few ways in which this might occur. One possibility is that the mandatory regime will “ambiguate” the meaning of an act in the ways identified by Lawrence Lessig, thereby providing the actor with a legal excuse for an action that he prefers but for which he would have faced social costs.¹³² For example, a switch from optional to required anonymity for voting allows those who want to vote anonymously to do so without sending any negative social signals (for example, that the voter is trying to hide something or that he fears vote coercion by his friends).¹³³ Another way in which removing choice might satisfy an actor’s preferences is by changing the entire playing field in a way that alters the impact of an anonymous or attributed action. For example, as Ayres and Bulow have argued, mandating anonymity for campaign donations can be expected to cause a decrease in large donations, making small donors relatively more important and more likely to donate.¹³⁴ Thus, although imposing anonymity or attribution might restrict choice in a way that discourages participation by some,¹³⁵ it may encourage participation by others by virtue of its impact on existing incentives. For this reason, the use of conditioning rules—like the use of entitlement rules—must always be done with attention to their possible secondary impacts.

B. Evaluation

The second phase of production is evaluation—the acts of interpretation or judgment that accompany the use of goods that have been created. As noted above, examples of this could include judging the truthfulness of information contained in a political pamphlet or drawing conclusions from the data contained in a tissue sample. And, as with the creation phase, anonymity and attribution rules again perform common functions that I identify. In particular, my analysis focuses on their use as conditions and rights.¹³⁶ I argue that these rules can be used to either reduce inefficiencies

132. Cf. Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943, 952 (1995) (noting that the meaning conveyed by buckling a seatbelt in a Budapest taxi, where no seatbelt is required by law, may signal mistrust of the driver, but that a similar action in a city with a seatbelt requirement may convey no meaning or, at most, signal that the occupant is law abiding); *id.* at 1010–12 (discussing “ambiguation” and its utility).

133. Likewise, requiring that charitable donations be identified ambiguates the meaning of attributed donation. It provides an excuse for someone who likes donating in order to receive praise, but who would feel social pressure to donate anonymously—and thus not donate—if attribution were not required.

134. Ayres & Bulow, *supra* note 80, at 851.

135. For example, the secret ballot is “estimated to have decreased voter turnout by about 12 percent.” ACKERMAN & AYRES, *supra* note 6, at 30.

136. While extinguishing rules will also impact the evaluation of the anonymized or identified good, evaluation-oriented concerns will not generally provide a rationale for choosing an extinguishing rule over an entitlement or conditioning rule. Further, within these two categories, evaluation may often be better served by conditioning rules, as they have an institutional rulemaker—rather than a private party—deciding whether the good at issue will be anonymous or attributed. And unlike incentives to create, evaluation does not

in evaluation or to control the factors that enter into evaluation based on a normative conception of the good at issue. Furthermore, I show that in performing these functions, the rules sometimes target the evaluation of the good itself and sometimes its source or recipient. In both cases, a central rationale for the rules derives from their impact not on the persons who are subject to them (as is the case with the creation-oriented rationales) but rather on the parties with whom these persons interact. The rules function by either preventing or allowing these parties to alter their behavior on the basis of the identity of the persons who are subject to the rules. Recognizing this reveals that the primary target of the rules is not always incentives.

1. Evaluating the Good Itself

My argument that anonymity can improve evaluation may appear controversial at first, as it is often expressly rejected in the scholarship on anonymity, which generally suggests that attribution is preferable *ex post*.¹³⁷ But a few examples reveal that the point is in fact quite intuitive.

Take, for example, the question of whether the sponsors of a political ballot initiative should be attributed. It is often suggested that they should on the grounds that this disclosure will help voters identify the interests that the initiative will truly serve.¹³⁸ However, if the sponsor's identity will be misleading (for example, if its name suggests that it is a community-based environmental group, but it is in fact an industry shell group), requiring anonymity might facilitate more accurate evaluation than attribution.

Likewise, a pseudonym that protects the anonymity of the source can reduce evaluation costs in certain circumstances. Take, for example, an author who writes multiple works under the same pseudonym, develops a large following, and then licenses the pseudonym to another person or group of persons who continue to write works of indistinguishable style and quality—for example, Tom Clancy and V.C. Andrews.¹³⁹ While many scholars suggest that such uses of pseudonymity are deceptive and do not produce the same public benefits as attribution rights,¹⁴⁰ Rachel Tushnet has rejected this conventional claim, noting that “information that is

generally benefit from leaving the decision in the hands of a private party. But of course, there will be exceptions. For example, if the private party has the desire and competency to facilitate accurate evaluation, as well as specialized knowledge of the good at issue, an entitlement rule might be preferable because it would allow the party to make more individualized and accurate decisions about whether the good should be attributed or anonymous.

137. *E.g.*, Margaret Ann Wilkinson, *The Public Interest in Moral Rights Protection*, 2006 MICH. ST. L. REV. 193, 231.

138. Elizabeth Garrett & Daniel A. Smith, *Veiled Political Actors and Campaign Disclosure Laws in Direct Democracy*, 4 ELECTION L.J. 295, 299–300 (2005).

139. *See* Tushnet, *supra* note 57, at 813.

140. *E.g.*, Greg Lastowka, *The Trademark Function of Authorship*, 85 B.U. L. REV. 1171, 1227 (2005); Diana Elzey Pinover, *The Rights of Authors, Artists, and Performers Under Section 43(A) of the Lanham Act*, 83 TRADEMARK REP. 38, 41 (1993).

confusing and even deceptive to some people is helpful to others.”¹⁴¹ She notes that insofar as a reader is looking to read a work in the style and quality of that author, the pseudonym will provide a valuable signal that allows the reader to efficiently find a book that she will like, much like a brand; and this can be the case whether or not the pseudonym is misleading as to the author’s true identity.¹⁴² In fact, stating the truth—that the book is written by author B in a style and quality indistinguishable from author A—may result in an inefficient search, as the reader may not trust the claim or devote resources to trying to verify it, even if it is certified by author A. In this type of case, it will be precisely because pseudonymity is deceptive in one sense that it will be able to perform the same valuable search function that true attribution often performs.

Finally, the evaluation value of anonymity is not limited to cases of deception. The more general lesson here is that whenever the recipient or user of a good will be biased in favor or against its source, such that the source’s identity will be a misleading signal, a regime in which the source is allowed or required to be anonymous will facilitate accurate evaluation.¹⁴³ This is one reason that academic journals conduct blind peer review of submissions, law schools use anonymous grading of exams, and symphony orchestras audition candidates by having them play behind a screen.¹⁴⁴ Another reason is that identity is generally considered to be a normatively objectionable factor to consider when evaluating these goods, even if it would increase efficiency.

Of course, as the literature on anonymity often highlights,¹⁴⁵ there can also be significant evaluation costs created by anonymity. The most obvious are cases in which anonymity is misleading in ways that increase search costs. In the case of authorial attribution discussed above, for example, if a fan of V.C. Andrews did not like the novels being written by her anonymous ghostwriters, their anonymity would increase the fan’s search costs. In addition, there are all the cases in which anonymity is not misleading, but in which attribution serves a positive evaluation function.

The ways in which attribution—as an entitlement or a condition—can reduce evaluation costs are more readily apparent and have been identified in various areas of scholarship. Intellectual property again provides an illustrative example. Here, a growing literature focuses on a consumer-oriented rationale for authorial attribution rights, treating authorship as a type of trademark that allows readers to more easily identify the types of

141. Tushnet, *supra* note 57, at 813.

142. *Id.* at 813–14.

143. Concern with preventing bias also provides a reason to not grant attribution rights.

144. On the implementation of anonymity in orchestra auditions over the 1970s and 1980s, see Claudia Goldin & Cecilia Rouse, *Orchestrating Impartiality: The Impact of “Blind” Auditions on Female Musicians*, 90 AM. ECON. REV. 715, 738 (2000) (finding that women were 50 percent more likely to advance to the second round in blind than in nonblind auditions).

145. See, e.g., Lidsky & Cotter, *supra* note 7, at 1559–63; Sophia Qasir, Note, *Anonymity in Cyberspace: Judicial and Legislative Regulations*, 81 FORDHAM L. REV. 3651, 3672 (2013).

works in which they would prefer to invest their time, attention, and money.¹⁴⁶ This informational function in the context of search is especially important for experience goods, “where consumers cannot discern the attributes of products before purchasing them, and must rely on prior experience in deciding among competing brands.”¹⁴⁷ And when the producer of the good does not want to provide such information, it might be required. For example, imposing attribution requirements on campaign advertisements allows the public to use the advocate’s identity when evaluating the content of the claims in the advertisements.¹⁴⁸ In these cases in which attribution facilitates evaluation, anonymity will disrupt it, and vice versa.¹⁴⁹

2. Evaluating the Source or Recipient of the Good

While the evaluation costs addressed by anonymity and attribution rules often concern the good that is subject to the rule itself, this is not their only function. For example, the reason to impose anonymity on a public utility company’s market transactions in futures and options is not to facilitate the accurate evaluation of the transactions themselves, but rather to prevent information asymmetries that would allow for other evaluations that would disrupt the efficiency of the market.¹⁵⁰ Likewise, in the campaign donation context, a core function of the attribution condition is not facilitating the evaluation of the attributed good (the donation), but rather the candidate who receives it. As explained by the Supreme Court in upholding this condition, the rule “allows voters to place each candidate in the political spectrum more precisely than is often possible solely on the basis of party labels and campaign speeches,” and “alert[s] the voter to the interests to which a candidate is most likely to be responsive and thus facilitate predictions of future performance in office.”¹⁵¹ In addition, the attribution condition assists voters in evaluating whether candidates have altered their policy positions in return for contributions—a function that is performed by monetary disclosure conditions in other contexts, as well. For example, most academic biomedical journals require that the sources of funding for a study be identified as a condition of publication, thereby allowing readers to

146. *E.g.*, Fisk, *supra* note 126, at 64 (discussing the branding function of attribution). See generally Laura A. Heymann, *The Birth of the Authonym: Authorship, Pseudonymity, and Trademark Law*, 80 NOTRE DAME L. REV. 1377 (2005); Lastowka, *supra* note 140.

147. Abraham Bell & Gideon Parchomovsky, *Pliability Rules*, 101 MICH. L. REV. 1, 45 (2002).

148. As with anonymity, however, there are situations in which attribution will not reduce evaluation costs and might even be affirmatively misleading, such as when a speaker trades on his identity to gain the trust of his audience and then deceives them.

149. In this sense, the evaluation functions of anonymity and attribution diverge from their creation functions, where both anonymity and attribution can serve the same specific function in the same context by acting on different margins of the same problem.

150. See *In re Pac. Gas & Elec. Co.*, 85 Cal. Pub. Util. Rep. 2d (PUR) 540, 1999 WL 667575, at *1 (Cal. P.U.C. 1999).

151. *Buckley v. Valeo*, 424 U.S. 1, 67 (1976) (per curiam).

discount the study's claims according to their understanding of the potential bias created by any financial conflicts of interest.¹⁵²

C. Allocation

The third and final phase of production is the allocation of goods—the determination of who has the right to possess and control their use after they have been created and evaluated. My argument here is that anonymity and attribution rules provide a way of achieving the efficient or fair allocation of a good when its anonymization or attribution alters the rationale for the default rights of control over it. In developing this argument, I first discuss how the rules can be used to produce efficient allocation (a goal that is targeted primarily by extinguishing rules), and I then discuss how they can be used to achieve fair allocation (a goal targeted by both extinguishing and conditioning rules).¹⁵³ In performing these functions, the rules can be seen as similar to liability rules,¹⁵⁴ as well as a variety of contract and property doctrines,¹⁵⁵ which I draw on in explaining how they work. More generally, what my analysis shows is that these uses of anonymity and attribution cannot be sufficiently explained in terms of their impact on behavior and incentives *ex ante*, as it might seem from the

152. For example, nearly 1,000 journals follow the International Committee of Medical Journal Editors' Uniform Requirements for Manuscripts Submitted to Biomedical Journals, which require that all authors who are participants in the peer review and publication process disclose all relationships that could be perceived as a conflict of interest. *Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Conflicts of Interest*, INT'L COMM. MED. J. EDITORS, http://www.icmje.org/ethical_4conflicts.html (last visited Feb. 24, 2014).

153. While I suggest that allocation is primarily targeted by extinguishing and conditioning rules, entitlement rules can also impact allocation. For example, the attribution of a monetary donation may cause the recipient to reject it.

154. For example, like liability rules, which allow an adverse party to purchase an entitlement by paying damages, *see* Guido Calabresi & Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972), extinguishing rules allow an adverse party to defeat an entitlement by causing the triggering event; like liability rules, they provide flexibility that is not afforded by property rule protection alone. Of course, a significant difference is that liability rules involve judicial intervention, whereas these extinguishing rules do not.

155. For example, as I highlight in footnotes below, there are similarities with the loss of contract rights through the doctrines of frustration of purpose, impracticability, or impossibility; the loss of in rem rights through the doctrines of changed conditions for servitudes, and adverse possession for real property; and the loss of intellectual property rights through the doctrine of genericism for trademark, and fair-use for copyright. *See infra* notes 160, 169–71, 174. One might distinguish the contract doctrines on the grounds that the extinguishing rules I have identified defeat entitlements provided by common law, statute, and regulation. The normative significance of this difference is debatable. Some scholars would argue that extinguishing property rights is more problematic than extinguishing contract rights, because parties can always contract around the extinguishing rule, even if it means using less efficient alternative measures to secure their reliance interests. *Cf.* Glen O. Robinson, *Explaining Contingent Rights: The Puzzle of "Obsolete" Covenants*, 91 COLUM. L. REV. 546, 573 (1991). But one might also conclude that this difference makes the extinguishing rules less problematic, as they do not interfere with freedom to contract, but rather with the grant of entitlements to which one has no absolute moral or legal claim in the first instance.

viewpoint of information economics. Rather, in the cases that I discuss, they must be understood as serving allocational goals *ex post*.¹⁵⁶ Understanding the complex ways in which they do so is crucial to understanding one of the most surprising and difficult-to-explain categories of rules in the taxonomy: extinguishing rules (i.e., rules that take away someone's rights when anonymity or attribution is imposed by others).

1. Efficient Allocation

The goal of efficient allocation is served by extinguishing rules when a triggering event—anonimization or identification—changes the interests of the anonymous or identified party such that the allocation of a right to that person becomes economically inefficient, and market obstacles will prevent the efficient reallocation of a good controlled by that right.¹⁵⁷ To illustrate the complex ways in which the rules perform this function, my analysis focuses on one controversial rule that does so: the rule that allows a researcher to extinguish a tissue donor's right to limit the use of his tissue in research—and even breach the express terms of his consent—merely by anonymizing the tissue. Analyzing the functions performed by this specific rule not only clarifies the allocational functions performed by anonymity and attribution rules in general (which is my goal in this Part) but also creates the foundation for my discussion of how this specific rule could be improved (which I discuss in depth in Part III.A.2).

The first obstacle to efficient allocation that can be solved with extinguishing rules is market organization costs.¹⁵⁸ These costs—which include identifying the parties who own an entitlement and structuring an effective exchange relationship with them—are one standard cause of market failure identified in the law and economics literature. The factors that contribute to these costs include nonpossessory property rights that are hard to identify, unforeseeable circumstances that are difficult to incorporate into initial rounds of contracting, and the existence of multiple parties.

Many of the factors that contribute to market organization costs are present in the default situations addressed by the extinguishing rules that I identified, including tissue donors' default rights to limit the use of their tissue in research no matter who possesses it. In this case, the tissue donors are provided a nonpossessory right of control over their tissue samples;

156. While information economics is primarily concerned with how information can be regulated to alter behavior (e.g., transactions), I take this to be a function of some but not all anonymity and attribution rules. For example, the rules that I characterized as targeting the creation of goods *ex ante*, such as whistleblower statutes, are primarily concerned with altering incentives and behavior of the parties impacted by the rule. But the rules that I discuss in this section target allocation *ex post*; and here, anonimization and attribution may merely provide a justification for reallocation of goods by other means.

157. I will focus on two types of obstacles: market organization costs and strategic bargaining. For an overview of these and other types of transaction costs that do not seem to be a driving force here, such as exclusion costs, see Robert C. Ellickson, *The Case for Coase and Against "Coaseanism,"* 99 *YALE L.J.* 611, 614–16 (1989).

158. *See id.*

these samples will be used in research that will likely extend beyond the donors' lifespans, it is often impossible to anticipate in advance what research studies will evolve, and a single project might use the tissue of thousands of donors. Thus, the default requirement that a researcher obtain specific consent for new uses of the tissue can impose significant market organization costs that will hinder biomedical research.

Further, while the expenditure of these costs might be economically efficient when the samples are identified, as the donors may have valuable privacy interests at stake, anonymization could change this balance. Imagine, for example, that the donors place little value on limiting the use of their tissue postanonymization as they are no longer worried about their privacy. If so, it is likely that the costs of obtaining specific consent will be greater than the value produced by the transaction—especially when the experiment is of minimal or uncertain value, as is often the case with research on a single tissue sample. Under these conditions, where the cost of exchange is high and its benefit to the parties is small,¹⁵⁹ the extinguishing rule currently in use (which eliminates the consent requirement on the basis of anonymization) would benefit one party with minimal or no harm to the other.¹⁶⁰ In this way, it would produce the economically efficient allocation of rights and tissue.

The second cause of inefficient allocation that can be addressed by extinguishing rules is strategic bargaining.¹⁶¹ In the tissue context, at least three types of strategic behavior could be expected to prevent the efficient reallocation of rights of control after anonymization (assuming—as I discussed above—that anonymization makes the default allocation inefficient by reducing the value that donors place on their rights of control). First, there is the possibility of “strategic holdout” by the donor who has a veto power over the research.¹⁶² This could happen when there is only one donor, but becomes increasingly likely when the agreement of multiple donors is needed (such as when a researcher needs a complete set of tissue samples), as the opportunity costs of holding out decrease with an increase in the number of parties.¹⁶³ Second, even if a researcher needs only one sample, barriers associated with monopoly or bilateral monopoly conditions could arise given the uniqueness of tissue and genetic data—a problem aggravated by the fact that the tissue will often be far more

159. In fact, for all the donors who would not object to research on their anonymized tissue, the requirement of re-consent produces transaction costs but produces no benefit.

160. A similar logic is one of the justifications for the fair-use doctrine in copyright, see Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1211 (1996), the changed conditions doctrine for covenants, see Susan F. French, *Toward a Modern Law of Servitudes: Reweaving the Ancient Strands*, 55 S. CAL. L. REV. 1261, 1280–81 (1982), and the privileges of private and public necessity in tort, see Bell & Parchomovsky, *supra* note 147, at 51 n.180.

161. On the strategic bargaining problem as a basis for limits on consensual rules allocating land rights, see Stewart E. Sterk, *Neighbors in American Land Law*, 87 COLUM. L. REV. 55, 69–74 (1987). See generally Robert Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 1, 14–29 (1982).

162. Robinson, *supra* note 155, at 571–72.

163. *Id.* at 572–73 (noting that there is less to gain from equal sharing of the surplus).

valuable to the researcher than to the donor.¹⁶⁴ Third, rent seeking by the tissue source could prevent efficient allocation if the researcher has invested significant time and energy into research using a collection of tissues in a biobank but has not yet completed his research; here, the time and energy would become a quasi-rent that a tissue source could try to extract, in addition to the value of his tissue, through threat of withdrawing consent.¹⁶⁵ By working around these three core obstacles to bargaining that have been identified in law and economics literature, the extinguishing rule can achieve the efficient allocation of the tissue and the rights of control over it.

At this point, I should perhaps reiterate that my argument here is not that this extinguishing rule—or any other rule that I have identified—is in fact justified because it serves the functions that I have theorized. Rather, my focus on the rule is illustrative, and my argument throughout this Part is explanatory. Here, my claim is just that when anonymization or attribution of a good makes the allocation of a right of control over the good inefficient by reducing the value of the right to the entitlement holder whose identity is at issue, extinguishing rules may work around various types of market failures (market organization and strategic bargaining) to achieve the economically efficient reallocation of the good.

However, I must also highlight at this point that my analysis thus far has assumed an *ex post* perspective (i.e., I have discussed how the rule would work when applied to an existing scenario), and that there are two limiting situations in which the *ex ante* effects of extinguishing rules (i.e., the effects going forward) might reverse some of this benefit and produce inefficient allocation.

First, perhaps the most significant possibility of this problem arises when the party that will benefit from the extinguishing rule is able to control the conditions that trigger it—as is the case in the tissue example, where the researcher can either obtain consent or anonymize. The problem here is that the rules reward the researcher who deliberately bypasses the opportunity to bargain in a “thick market” with the tissue source and who instead knowingly acts in a way that creates the “thin market” situation that justifies the operation of the rule.¹⁶⁶ This not only increases the possibility

164. The reason is that the larger the surplus, the greater the gain from obtaining the larger share. James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440, 461 (1995). On the problem of bilateral monopoly, see Gregg P. Macey, *Coasean Blind Spots: Charting the Incomplete Institutionalism*, 98 GEO. L.J. 863, 903 (2010). The problem of bilateral monopoly justifies “most of the land law rules that depart from the geometric-box allocation.” Sterk, *supra* note 160, at 58.

165. The researcher would thus find himself in the same situation as an adverse possessor who has improved a property on the expectation that he will be able to continue using it, but is then confronted by the true owner who can demand more than market value for the property. On the use of adverse possession doctrine to solve this problem, see Merrill, *supra* note 29, at 1131. *But see id.* at 1152–54 (critiquing this rationale). On rent seeking generally, see Benjamin Klein et al., *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297 (1978).

166. By “thin market,” I mean a market in which the conditions allow the seller to extract economic rents from the buyer, while a “thick market” is one in which the conditions do not

that the allocation of tissue rights produced by the rules will be inefficient, but also raises concerns about the fairness of the rules—a topic to which I return below.¹⁶⁷

Second, if we were to think that a source of a tissue sample would value control *more* than the researcher, consideration of market organization costs might weigh against the extinguishing rule. The reason for this is that if the researcher provides a large number of parties with access to the donor's tissue, the operation of the extinguishing rule will require the donor to bargain with all of them to buy back his entitlement, imposing significant market organization costs on him. If we think that there are few researchers who will value the entitlement more than the donor, allocating the entitlement to the donor could be preferable, as efficient allocation will be achieved through fewer bargains.¹⁶⁸ Thus, these are limiting factors to consider when deploying extinguishing rules on economic efficiency grounds.

2. Fair Allocation

Anonymity and attribution rules are not only a means of achieving the efficient allocation of a good when its anonymity or attribution reduces its value to the party whose identity is at issue. In addition, they are a way of achieving fair allocation of a good when anonymity or attribution alters the weight society is willing to accord competing interests in controlling it.

One such rationale for the rules exists when anonymization or attribution eliminates the sole basis for the grant of the right of control at issue. Imagine, for example, that the reason we grant a right—such as the right to have a third party represent one's interests in court, or the right to prevent use of one's tissue in research—is merely to prevent a privacy harm, and that anonymization will prevent that harm. Under these conditions, an extinguishing rule can be justified on the grounds that the right is no longer deserved (regardless of whether the entitlement holder still values it more than anyone else).¹⁶⁹ Here, the rule would give legal recognition to the idea

allow for this. Cf. Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 88–89 (1986) (identifying this problem with respect to adverse possession and eminent domain).

167. See *infra* Part II.C.2.

168. Cf. I. Glenn Cohen, *The Right Not To Be a Genetic Parent?*, 81 S. CAL. L. REV. 1115, 1157 (2008) (suggesting a similar rationale for granting an entitlement not to be a genetic parent).

169. This is much like the function of a variety of intellectual and real property rules that extinguish rights in nonpossessory property. For example, under the genericism doctrine, a trademark loses its protection if it no longer serves the consumer signaling functions for which it was granted, see Bell & Parchomovsky, *supra* note 147, at 46–47, and under the changed conditions doctrine, a covenant becomes unenforceable if it is impossible to substantially secure the benefits originally contemplated. 2 AMERICAN LAW OF PROPERTY § 9.39 (A. James Casner ed., 1952). While this justification for the changed conditions doctrine (rather than a transaction costs justification) has been criticized for undermining the legal autonomy of the parties who created it, see, e.g., Robinson, *supra* note 155, at 578, this critique does not apply to the entitlements defeated by the extinguishing rules that I have identified, which were not created by contract, but rather by common law and statute.

that the triggering event eliminated the basis of the right, bringing about a state of affairs in which there was no longer a reason to grant it to anyone—an idea that would explain why these rules extinguish rights, rather than transfer them, as some otherwise similar rules do.¹⁷⁰

A second rationale for the rules exists when the grant of the right is based on a societal balancing of competing distributional interests that is altered through anonymization or identification. Take, for example, the researcher who has invested significant time and energy into research using a collection of tissues, but has not yet completed his research. Above, I mentioned a transactions-cost justification for the use of an extinguishing rule here, but we might also justify the rule on the grounds that it could prevent a tissue source from obstructing research that would benefit society. The idea here would be that anonymization weakens the source's private interests in preventing use, changing the balance of distributional concerns and justifying the allocation of tissue to the researcher as the most socially productive user.¹⁷¹

Furthermore, both of these rationales do not only apply to extinguishing rules, but also to conditioning rules. For example, to bring a tort claim for misappropriation of identity, the identity at issue cannot be a pure pseudonym that protects one's anonymity, but rather must identify the person at issue.¹⁷² And this rule can be justified simply on grounds of fairness if a pure pseudonym is not the type of identity in which society is willing to allocate this legal interest and right of control.

It is important to recognize, however, that like the efficiency-oriented rationales for extinguishing rules that I identified above, these fairness-oriented rationales focus on the benefit of the rules *ex post*. And as above, this benefit might, in a limited set of circumstances, be outweighed by the costs of the rules *ex ante*.

Here, the potentially troubling cases are not those in which the beneficiary of the rule controls the triggering event (as above), but rather those in which the original entitlement holder is able to take measures that will prevent the triggering event or reallocation of goods that will result from it. In these cases, there is a possibility that the extinguishing rules will incentivize costly behavior by the original entitlement holder that is

170. This makes the rules similar to the genericism doctrine for trademark rights and the time limit for patent and copyright (after which the rights cease to exist), while distinguishing them from the otherwise similar rule of adverse possession for real property (which transfer all of the entitlements of the original owner to the new owner). See Bell & Parchomovsky, *supra* note 147, at 55–56 (discussing adverse possession).

171. In these regards, the rationale for the extinguishing rule would again parallel the rationale for adverse possession, see Joseph W. Singer, *The Reliance Interest in Property*, 40 STAN. L. REV. 611, 667–69 (1988) (stating that the doctrine grants title to the more socially productive user of the land, and gives legal recognition to the adverse possessor's reliance and expectation interests that were fostered, intentionally or negligently, by the owner), and the rationale for the changed conditions doctrine for covenants. See Stewart E. Sterk, *Freedom from Freedom of Contract: The Enduring Value of Servitude Restrictions*, 70 IOWA L. REV. 615, 643–44 (1985).

172. See *supra* notes 91–93 and accompanying text.

unrelated to the logic of the entitlement. For example, if a hospital patient who has tissue removed in the course of a medical procedure wants to prevent his tissue from being anonymized, banked, and used in research, he may only be able to do so through an investment of time, energy, or money that is unrelated to the reason for which the federal Common Rule regulations provided him with a baseline right to limit the use of his tissue.¹⁷³ In this type of situation, where the extinguishing rule does not incentivize investments in activities that build the value that justifies the grant of the underlying entitlement, the burdens the rule imposes are arbitrary and thus arguably unfair in ways that those imposed by similar rules from other areas of law are not.¹⁷⁴ For this reason, we must look out for this possibility when deploying extinguishing rules and modify their applications accordingly.

* * *

In sum, my argument in this Part is that the seemingly opposite anonymity and attribution versions of each category of rule can serve a common set of functions across three phases of production: creation, evaluation, and allocation. They both shape the costs and benefits of creating goods in order to align private incentives with public goals and values, control information flows in order to address evaluation costs associated with using goods that have been created, and alter rights of control over goods in order to achieve their efficient or fair allocation. Furthermore, each of these phases of production can be targeted by various categories of rules. Thus, when combined, my theory and taxonomy provide a framework of previously unrecognized “design levers.”¹⁷⁵ These include the six types of rules that I identified in my taxonomy and the three phases of production that I identified in my theory.

Before turning to some of the more complex design strategies revealed in my analysis, however, it is worth briefly recapping the basic picture developed thus far. To do so, I provide, in what follows, a broad-brushstrokes overview of how the core type of rules and functions that I have identified would play out in the production of a single good. My focus is the donation and banking of human biospecimens (sperm and tissue) for use in reproductive medicine and biomedical research. This brief review

173. Cf. Cohen, *supra* note 168, at 1157 (discussing the self-protection costs that one could incur in trying to prevent others from obtaining one’s genetic material and using it to create a child).

174. For example, the rules of adverse possession for real property and genericism for trademarks incentivize investments in activities that build the value that provides the rationale for granting the entitlement in the first instance. Genericism incentivizes owners of trademarks “to preserve competition in their field of trade, and to distinguish their products from competing ones.” Bell & Parchomovsky, *supra* note 147, at 67. Likewise, adverse possession encourages property owners to use their property and communicate clearly with the rest of the world about their property interest (and also deters the owner from temporarily allowing adverse possession in order to extort quasi-rents after the adverse possessor has improved the property). *Id.* at 57–58.

175. On the concept of design levers, see, for example, Benkler, *supra* note 28, at 312–23.

demonstrates how each of the rules in my taxonomy can be combined with functions identified in my theory to achieve the production of a given good—striking different balances between creation, evaluation, and allocation concerns.

(1) *Anonymity as a right.* The first basic option would be to grant donors an anonymity right. In the creation phase, this rule would allow donors to benefit from any existing incentives to donate, such as compensation or personal satisfaction, while avoiding the costs of having their identified tissue in public circulation. For example, in the research context, anonymity would allow donors to avoid costly disclosures of private information; and in the reproductive context, it would allow them to avoid the imposition of legal parenthood by the state, and attributional parenthood by their “children” and third parties.¹⁷⁶ In these ways, the rule would effectively allow donors to externalize the costs associated with anonymity, which emerge *ex post* in the evaluation phase (that I discuss in more detail below).¹⁷⁷

(2) *Attribution as a right.* The second basic option would be to grant donors an attribution right, which, unlike an anonymity right, would impose few evaluation costs, but could be expected to incentivize donations from a different donor population by allowing the internalization of certain benefits. In the reproductive context, for example, there are sperm donors for whom the possibility of attributional parenthood is a benefit rather than a cost of donating.¹⁷⁸ In the research context, there are likely donors for whom sufficient incentive would be attribution in the form given to the source of one of the most important cell lines in modern medicine, Henrietta Lacks, whose immortalized cells bear an abbreviation of her name (though in her case, attribution was not a right, nor was it offered as an incentive).¹⁷⁹

176. The importance of anonymity in this regard is highlighted by the fact that countries that have prohibited anonymity have seen significant decreases in donations. Cohen, *supra* note 41, at 463. On the distinction between different types of parenthood (legal, gestational, genetic), see Cohen, *supra* note 168, at 1121.

177. Given that the grant of an anonymity right is not costless, the value of its production gains need to be discounted by the lost value of the identifying information for those donors who would have donated tissue without the right; with respect to this limited set of donors, the creation of the right will result in a complete loss. However, as my theory also highlights, the evaluation costs created by the anonymity right might be mitigated by the fact that anonymity rules do not only allocate a preexisting cost-benefit profile, but also modify it. For example, the creation of the anonymity right may result in premium payments for identified donors, thus incentivizing more attributed donations as well.

178. Studies show that where sperm banks have introduced an open-identity option, the percentage of open donations has grown every year that the option has been available. Joanna E. Scheib & Rachel A. Cushing, *Open-Identity Donor Insemination in the United States: Is It on the Rise?*, 88 FERTILITY & STERILITY 231, 232 (2007).

179. The “HeLa” cell line (named for first two letters of “Henrietta” and “Lacks”) is one of the most important cell lines in medical history. Robin Feldman, *Whose Body Is It Anyway? Human Cells and the Strange Effects of Property and Intellectual Property Law*, 63 STAN. L. REV. 1377, 1381 (2011). Henrietta Lacks was not, however, given a right of attribution, nor did she choose to donate her cells—a subject of much controversy. See REBECCA SKLOOT, *THE IMMORTAL LIFE OF HENRIETTA LACKS* 1–7, 33, 105–09 (2011).

(3) *Anonymity as a condition.* The third option would be to require that donors be anonymous. While there may be little reason to think such a requirement would be needed to prevent improper influence in the creation phase—the standard rationale for this type of rule—an anonymity condition could be desirable on similar grounds as an anonymity right. Further, while anonymity can impose evaluation costs, my framework highlights one potential evaluation-oriented benefit. Like the anonymity condition imposed on certain market transactions,¹⁸⁰ this rule would prevent third parties from capturing value that they did not produce—for example, by discovering and profiting from a donor’s genetic and health data.

(4) *Attribution as a condition.* The fourth option would be to require that donated tissue and sperm be attributed. Doing so would reduce many evaluation costs, including the costs of providing medical care to donor-conceived children who cannot access their familial medical histories due to sperm donor anonymity,¹⁸¹ and would capitalize on the research benefits of attribution that might be undercompensated.¹⁸² Further, although the rule would open donors to costs that might disincentivize creation, the existence of these costs might also give rise to new donor incentives—for example, by changing the social significance of donation in such a way that it would appeal to a new donor base.¹⁸³

(5) *Anonymity, when imposed, extinguishes a right of control.* The fifth option would be to treat anonymization as a trigger that extinguishes a right of control that donors have in their tissue or sperm. I identified the logic of using such a rule for research tissue above, and a similar logic could apply for sperm. For insofar as our law recognizes a person’s right not to be a genetic parent based on the harm of “attributorial parenthood,”¹⁸⁴ an

180. See *supra* note 73 and accompanying text.

181. While this problem could be partly solved by collecting de-identified medical records at the time of donation, this would miss subsequent data and would not allow for crucial follow-up questions. In addition, insofar as rich medical records can be easily re-identified, this option would provide no benefit to the donor. Of course, an attribution rule would not itself solve the problem, as the donor might be unreachable or refuse to provide answers. But the rule would eliminate one significant barrier to obtaining this information—and without significant administrative costs. In addition, the rule would reduce the personal costs to these children of not knowing the identities of their genetic parents.

182. It would also allow for the return of medically significant information to patients—a growing practice that creates new incentives to donate, and that many scholars argue is morally, and perhaps legally, required. See, e.g., Henry T. Greely, *The Uneasy Ethical and Legal Underpinnings of Large-Scale Genomic Biobanks*, 8 ANN. REV. GENOMICS & HUM. GENETICS 343, 359–60 (2007).

183. For example, the limited empirical data suggests that in some countries that have imposed attribution requirements for sperm banks, donations from the traditional donor base (of young men motivated by financial compensation) declined dramatically, but donations subsequently rebounded with the emergence of a new donor base (of older men motivated by a desire to help infertile couples), responding to the changing social significance of donating. Ellen Waldman, *What Do We Tell the Children?*, 35 CAP. U. L. REV. 517, 550–56 (2006). Thus, the rule choice here should turn not only on whether we want a good produced, but also on the types of producers we prefer.

184. See Cohen, *supra* note 168, at 1134–45 (arguing that the right not to be a genetic parent must be grounded not in the protection of bodily integrity and best interests, but rather in the harm of “attributorial parenthood”).

extinguishing rule eliminating this right when one's genetic material is anonymized could be justified on the grounds that anonymization would eliminate the possibility of the harm that would provide the basis of the right. Further, as in the research context, the rule may be justified as freeing the material for more socially productive uses and serving efficiency ends by working around the market organization costs of reallocating the right.¹⁸⁵

(6) *Attribution, when imposed, extinguishes a right of control.* The sixth option would be to treat attribution as a trigger that extinguishes a right associated with the use of one's tissue or sperm. As noted in the taxonomy, this type of rule is already used for forensic DNA biobanks, and it is possible that a similar rationale would justify its use for sperm banks. Take, for example, a sperm donor's right not to be the legal parent of the children produced with his sperm. If the only reason to grant donors this right is that it is a necessary corollary of anonymous donation, which is desirable for its impact on production,¹⁸⁶ the identification of the donor—whether consented to or not—would undermine the basis for granting the right. In this case, a rule that extinguished a donor's right not to be a legal parent on the basis of his identification would be justified.¹⁸⁷

Thus, each of the basic types of rules in my taxonomy can be combined with considerations identified in my theory to reframe and find new solutions to a single problem of production. In sketching how each of them would work, I have begun to demonstrate the generative potential of my institutional design framework, which reframes our current rule choices in a way that reveals their contingencies, key characteristics, and alternatives. In what follows, I explore some of the more specific and complex implications of my analysis.

III. IMPLICATIONS FOR LAW AND POLICY

I have thus far developed a taxonomic account of the anonymity and attribution rules that are at work in our legal system and a theory that explains their core functions—a recasting of anonymity that significantly clarifies the law that we have. In what follows, I demonstrate that my

185. These costs could be considerable if identifying information is lost or the genetic material becomes widely distributed. However, the concerns about strategic bargaining that I discussed with respect to research biobanks arguably have less force here. Because potential recipients do not sink investments that require continued access to a single source's tissue, sources will not be able to engage in rent seeking; and because no source's tissue is essential to the reproductive bank, sources will have less incentive to hold out.

186. For example, the bidirectional anonymity used by sperm banks not only removes a disincentive for many to donate, but also provides a recipient with assurance that the donor will not later seek to bring an action to establish legal parenthood over the children produced with his sperm.

187. Of course, the assumption in this hypothetical might not match the law we have, as we might grant sperm donors a right not to be a legal parent for reasons other than the fact that it is a necessary corollary of anonymous donation. For example, we might do so on the grounds that we think they have done nothing to deserve the imposition of legal parenthood. If so, identification would not undermine the basis of the right, such that the extinguishing rule would not be justified.

analysis can also help us rethink and improve our law, revealing new solutions to difficult questions of law and policy. It does so by providing a framework of previously unrecognized “design levers.”¹⁸⁸ These include the six types of rules that I identified in my taxonomy and the three phases of production that I identified in my theory. In what follows, I draw on these levers in developing generally applicable lessons for the design of institutions that seek to incentivize or control the production of goods. I then touch briefly on the corresponding production of liberal legal subjects.

A. *The Production of Goods*

This section identifies three implications of my analysis for institutional design, each of which reveals more sophisticated and effective ways to address common concerns about the production of goods that arise across our law.

1. Controlling Production

The first general implication of my analysis for institutional design is that when we are concerned about “improper influence”¹⁸⁹ in the production of a good that performs an important public function but may also serve a conflicting private interest, we can use a conditioning rule requiring either anonymity or attribution to address this conflict. This implication is counterintuitive, as the two rules are antithetical and would thus seem to perform opposite functions. But as my analysis reveals, they can be functionally equivalent when they target different phases of production—specifically, when the attribution condition targets *evaluation*, or when the anonymity condition targets *creation*. These two potential strategies can be represented as follows:

	Anonymity	Attribution
Conditioning rule	Anonymity is a condition (targeting creation)	Attribution is a condition (targeting evaluation)

An example will help demonstrate this point. Take, for instance, the problem of how to prevent undue influence created by financial conflicts of

188. On the concept of design levers, see, for example, Benkler, *supra* note 28, at 312–23.

189. I use the term “improper influence” broadly, as the lesson I identify applies generally to production problems that can be characterized in these terms. For example, improper influence could be defined as “corruption,” and corruption could be defined in either intrinsic or consequentialist terms, *cf.* I. Glenn Cohen, *Circumvention Tourism*, 97 CORNELL L. REV. 1309, 1377 (2013) (differentiating between these forms of corruption), or it could be defined as bias of various forms. In short, the lesson is normatively pluralist.

interest in research universities. This problem has received renewed attention in the wake of the financial crisis of 2008, as it has become clear that many prominent academic economists provided public policy advice in congressional hearings and in academic publications on issues in which they had financial interests by virtue of their connections with private firms.¹⁹⁰ Whether or not these connections affected these economists' views on financial theory and regulation, they created a conflict of interest, and the institutional design question is how to manage such conflicts—conflicts in which an expert opinion performs an important public function but may also provide a private benefit.

The standard way to manage such conflicts, apart from using prohibitions, would be to require attribution of donors and funders as a condition of engaging in relevant activities. For example, Congress could impose disclosure requirements as a condition of testifying before congressional committees,¹⁹¹ and academic journals could impose them as a condition of publication.¹⁹² This strategy would address the conflict of interest problem by targeting the evaluation of the resulting good: the testimony or the publication. It would function by allowing third parties to discount the academic's statements and opinions according to their understanding of the potential bias created by the conflict of interest. Thus, it would at its core be an *ex post* strategy, addressing the problem after it has arisen—which is not to say that the attribution condition would not also function *ex ante*, discouraging the creation of new conflicts of interest. However, it would only have this impact on creation *ex ante* by virtue of its efficacy as an evaluation strategy *ex post*, which may not be as effective as is often imagined.¹⁹³

The alternative way of controlling these financial conflicts of interest—*as identified in the table above*—would be to require anonymity as a condition of funding academic research. For example, we could require that funds be funneled through an intermediary body (either within the university or a neutral third party) that would anonymize and distribute them to the

190. See, e.g., Emily Flitter et al., *Special Report: For Some Professors, Disclosure Is Academic*, REUTERS (Dec. 20, 2010), <http://www.reuters.com/article/2010/12/20/us-academics-conflicts-idUSTRE6BJ3LF20101220>.

191. Currently, this is not required. For example, one study found that almost one-third of academics who testified before congressional committees during the financial regulation overhaul of late 2008 to early 2010 failed to disclose their private financial affiliations. *Id.*

192. This is already common practice in the field of biomedical research, where nearly 1,000 journals require that all authors who participate in the peer review and publication process disclose all relationships that could be perceived as a conflict of interest. See *Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Conflicts of Interest*, *supra* note 152.

193. As discussed in greater detail below, one problem with evaluation strategies is that the public that is being asked to perform the evaluations often does not have the expertise, time, or desire to do so. Cf. Daylian M. Cain et al., *The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest*, 34 J. LEGAL STUD. 1, 1 (2005). Further, even if effective *ex post*, some attribution conditions may have perverse effects *ex ante*. For example, some empirical evidence suggests that “disclosure can increase the bias in advice because it leads advisors to feel morally licensed and strategically encouraged to exaggerate their advice even further.” *Id.*

recipients. Unlike the attribution strategy, which would intervene at the evaluation phase in the production of the testimony or the publication, this anonymity strategy would intervene at the creation phase. It would function by preventing the recipient of the funds from knowing their source, thus preventing the formation of a biased opinion. It would be an *ex ante* strategy, preventing the problem from emerging rather than trying to manage it once it has emerged.¹⁹⁴

The upshot here is that mutually incompatible anonymity and attribution conditions can be used to solve the same problem by intervening in different phases in the production of the good at issue. This point is relevant not only when designing a policy for an area that is not yet governed by either type of rule, but also in rethinking areas in which our law currently uses one or the other. Here, my analysis offers two general lessons.

First, it suggests that whenever *attribution* requirements are being used to address a production concern by targeting *evaluation*, we might instead use an *anonymity* requirement to target *creation*.¹⁹⁵ Take, for example, the question of how to address the concern that politicians and expert witnesses will be influenced by the identities of those who fund or hire them. We currently address both of these concerns with the same conditioning rule, requiring that the source of funds be attributed to target evaluation *ex post*. Our campaign finance regulations, which require disclosure of donations, place “the question of undue influence or preferential access in the hands of voters, who . . . can follow the money and hold representatives accountable for any trails they don’t like.”¹⁹⁶ Likewise, our judicial system, in which expert witnesses testify on behalf of the litigants who paid them, places the question of undue influence in the hands of the jurors who can discount the expert’s testimony according to their evaluation of the expert’s bias.¹⁹⁷

However, as my analysis highlights, we might also address these concerns with the opposite rule, requiring that the source of funds be

194. This type of suggestion has been made in the biomedical research context, although not framed in these terms. For an excellent proposal along these lines, see Christopher Tarver Robertson, *The Money Blind: How To Stop Industry Bias in Biomedical Science, Without Violating the First Amendment*, 37 AM. J.L. & MED. 358 (2011); see also Dennis F. Thompson, *Understanding Financial Conflicts of Interest*, 329 NEW ENG. J. MED. 573, 575 (1993) (proposing devices such as blind trusts to insulate the physician from the secondary interest).

195. However, the opposite is not true. When *anonymity* requirements are being used to address a production concern by targeting evaluation, we cannot instead use an *attribution* requirement to target creation. For example, the requirement that PG&E use an agent to remain anonymous when buying futures (which prevents parties from using its identity when evaluating the purchases) is not interchangeable with a requirement that its purchases be attributed. Thus, attention to the intersection between the rules and the three phases of production not only reveals when they are interchangeable, but also when they are not.

196. Kathleen M. Sullivan, *Against Campaign Finance Reform*, 1998 UTAH L. REV. 311, 326; see also 11 C.F.R. § 110.4 (2013). This strategy has been in use since the Publicity Act of 1910. Act of June 25, 1910, ch. 392, 36 Stat. 822; Deborah G. Johnson et al., *Campaign Disclosure, Privacy and Transparency*, 19 WM. & MARY BILL RTS. J. 959, 965–68 (2011).

197. See 3 STEPHEN A. SALTZBURG ET AL., FEDERAL RULES OF EVIDENCE MANUAL § 702.03[12] (10th ed. 2011).

anonymous in order to target the creation of undue influence. For example, to address this problem in the context of campaign donations, we might require that donations—like votes—be collected in a way that imposes anonymity on them and prevents a donor from proving to a politician that he or she made a given donation.¹⁹⁸ Likewise, to address the problem of biased expert testimony in civil litigation, we could create an intermediary agency that litigants could use to hire experts to render opinions without knowledge of the litigants' identity.¹⁹⁹

Second, and conversely, my analysis suggests that whenever *anonymity* requirements are being used to address a production concern by targeting *creation*, we might instead use an *attribution* requirement to target *evaluation*.²⁰⁰ For example, undue influence in the production of votes in elections—like undue influence in the production of campaign donations and expert scientific testimony—has many margins on which anonymity and attribution rules could operate. Currently, we require anonymity to address this concern, as our policy is made with a focus on the relationship between the voter and the person trying to corrupt the vote, seeking to prevent undue influence at the upstream phase of creation.

However, if we were to instead focus on the relationship between the voter and the public, we would see that we could achieve the same goal by requiring that votes be attributed. In imposing an attribution condition, we would essentially import the logic of our current campaign donation law into our election law—rather than vice versa, as discussed above. Just as the attribution of campaign donations allows voters to hold representatives accountable for any money trails that they do not like, attribution of votes would, as John Stuart Mill argued, force voters to “adhere to conduct of which at least some decent account can be given.”²⁰¹ In this way, we would replace an anonymity requirement that addresses corruption by targeting the creation of votes with an attribution requirement that would target their evaluation.

Thus, the more general lesson revealed by my framework is that the choice between anonymity and attribution rules should not only be based on the nature of the good at issue and a first-order preference for secrecy or disclosure, but also on a second-order preference for the rule that targets the

198. A variety of scholars and policymakers have made suggestions along these lines, though none have been framed in these terms, nor have they been seen as part of a generally available institutional design move. See, e.g., ACKERMAN & AYRES, *supra* note 6, at 268 n.26 (citing various proposals). For a detailed account of how this system might work in practice to prevent donors from revealing their donations, see *id.* at 93–110, and Ayres & Bulow, *supra* note 80.

199. For a proposal of a sophisticated double-blind system and explanation of why self-interested litigants might chose to use it, see Christopher Tarver Robertson, *Blind Expertise*, 85 N.Y.U. L. REV. 174 (2010).

200. However, the opposite is not true. See *supra* note 195. When *attribution* requirements are being used to target creation, we cannot instead use an *anonymity* requirement to target evaluation. For example, when attribution requirements are used to prevent a speaker from defaming another, an anonymity requirement will do nothing to facilitate evaluation of the problem.

201. MILL, *supra* note 1, at 200.

margin of the production problem that is easier to solve—and furthermore, that this latter preference should be based on a consideration and balancing of two core factors.²⁰²

First, we must consider the likely difficulty of imposing perfect, rather than partial, anonymity or attribution. For as Jeremy Bentham long ago realized with respect to voting: “In secret voting, the secrecy cannot be too profound: in public voting, the publicity can never be too great. The most detrimental arrangement would be that of demi-publicity.”²⁰³ Thus, in choosing a rule, we must determine the feasibility of creating an institution that imposes an anonymity condition in a way that cannot easily be pierced by private parties trying to resist it, and compare this to the feasibility of creating an institution that imposes an attribution condition in a way that the information can be effectively accessed by the public.

Second, we must consider the likely efficacy of anonymity and attribution strategies—if perfectly imposed and maintained—in preventing improper influence in the production of a given good. With respect to anonymity, this assessment will likely be fairly simple, as a creation-oriented anonymity strategy does not require any further action beyond implementation and maintenance to be effective. An evaluation-oriented attribution strategy, by contrast, requires several additional steps to be effective, each of which must be considered when choosing a rule. First, we must consider whether the identifying information will actually allow the evaluator to accurately identify and differentiate improper influence from normal activity, which may be more difficult than is often imagined, turning on both the nature of the activity²⁰⁴ as well as the expertise of the evaluator.²⁰⁵ Second, we must consider whether the evaluator will be able to effectively respond to any detected improper influence, which may also be more difficult than is often imagined, turning on whether sanctions are

202. When neither of the strategies has a clear benefit over the other, we might even use a middle path strategy suggested by my framework, which is to provide the parties being regulated with the option to choose between anonymity and attribution conditions. One of the few laws that does this is the Federal Ethics in Government Act, which requires that certain federal officeholders either fully disclose all their financial holdings and any possible conflicts of interest, or place their holdings in a blind trust. 5 U.S.C. app. 4 § 102(a) (2012).

203. Jeremy Bentham, *Essay on Political Tactics*, in 2 THE WORKS OF JEREMY BENTHAM 259, 370 (John Bowring ed., Edinburgh, William Tait 1843); see also Allison R. Hayward, *Bentham & Ballots: Tradeoffs Between Secrecy and Accountability in How We Vote*, 26 J.L. & POL. 39, 78 (2010) (arguing against write-in ballots and other forms of voting that are neither completely secret nor completely public).

204. For example, if a politician changes a policy position to agree with a donor immediately after receiving a large donation from that donor, improper influence might be the best explanation for the change, making attribution an effective strategy. But if the change does not take place immediately, it may be more difficult to differentiate the improper from the normal policy change, thus making attribution a less effective strategy.

205. While some such evaluations may be within the competency of the general public, others may benefit from experience of expertise. For example, if the question is whether an expert witness opinion is biased, judges or other repeat players might be more effective than jurors in making use of the attribution condition.

actually available²⁰⁶ and whether the value of the good at issue can be accurately discounted.²⁰⁷

In short, anonymity and attribution strategies will often have strengths and weaknesses that are inversely related: attribution will often be easier to implement and maintain, because unlike anonymity, it cannot be easily pierced by parties trying to resist it. Anonymity, however, if achieved, will often be more effective, because it avoids the difficulties of using and acting on the basis of the information that an attribution strategy provides. Thus, the choice between rules should turn primarily on a balancing of these two general factors, in combination with context-specific considerations, such as whether one rule will cause a decline in the production of the good, and if so whether this is tolerable.²⁰⁸

2. Tailoring Production

A second core implication of my analysis for institutional design is that when we want to create narrowly tailored solutions to production concerns, an unrecognized but powerful strategy is to combine anonymity and attribution rules that are in tension with each other and that target different phases of production, using one as a baseline rule to address our primary production concerns, and another to limit that baseline rule and address secondary concerns.

A very simple example of this type of strategy can be seen in existing criminal law, where the law allows people to provide tips to the police anonymously (a baseline entitlement rule to address creation concerns), but courts will not allow an anonymous tip to provide probable cause in and of itself (a conditioning rule to address evaluation concerns).²⁰⁹

In what follows, I focus on a more sophisticated application of this lesson. I show how we might adopt a baseline rule under which anonymization extinguishes one's right of control over a good (on the grounds that this will *on average* result in the efficient *allocation* of the good), but grant a right of attribution that will allow someone who objects to this anonymization to prevent it (in order to *individually address* secondary concerns about the *creation, evaluation, or fair allocation* of the good). This design strategy can be represented as follows:

206. For example, if a voter wants to sanction a politician who changed positions in response to a donation, there must be another candidate on the ballot who the voter prefers.

207. Take, for example, the requirement that industry funding of scientific research be attributed in most academic publications. *See supra* note 152 and accompanying text. If the rationale for this rule is that it will allow those using the study to discount its findings according to their evaluation of the authors' potential bias, the efficacy of the rule will turn on the accuracy of such discounting, which some empirical evidence draws into question.

208. For example, requiring anonymity for campaign donations and research funding might cause a decline in the production of both of these goods, but we might be less concerned about this in the former case if we think that the public does not benefit from current levels of campaign spending.

209. *See supra* note 90 and accompanying text.

	Anonymity	Attribution
Entitlement Rule		Attribution of a good is a right (as a limiting rule targeting our secondary creation concerns)
Extinguishing Rule	Anonymization extinguishes a right of control over a good (as a baseline rule targeting our primary allocational concerns)	

Under this combination of anonymity and attribution rules, the entitlement rule would limit and tailor the operation of the extinguishing rule.

Further, this is just one way of combining rules that are in tension with each other to address competing production concerns. Other options include: an anonymity condition combined with an attribution right; an attribution requirement combined with an anonymity right; and an attribution extinguishing rule combined with an anonymity right. To demonstrate the practical value of this design strategy, however, I will focus on the combination of rules represented in the table. And I will reveal its payoff in the current legal controversy over the control of human tissue samples in research biobanks—a controversy whose resolution will significantly impact the future of healthcare and the materialization of the promises of personalized medicine.²¹⁰

a. *The Controversy*

Biobanks are large-scale collections of human biospecimens (e.g., blood, saliva, and surgical tissue) and associated data (e.g., personal health information about the sources) that play a crucial role in medical genomics research.²¹¹ They often contain thousands of samples and are organized and searchable entities that make lending decisions to qualified researchers. Currently, samples from the vast majority of Americans are being stored

210. The research enabled by large scale biobanking will, for example, dramatically accelerate the discovery of the genetics of many diseases, lower the costs of drug discovery and medical device development, and provide the basis for a new paradigm of personalized medicine in which choice of drug and drug dose will be based on an individual's genetics, rather than the genetics of the population. See, e.g., Ultan McDermott et al., *Genomic Medicine: Genomics and the Continuum of Cancer Care*, 364 *NEW ENG. J. MED.* 340, 347 (2011).

211. See 1 NAT'L BIOETHICS ADVISORY COMM'N, *RESEARCH INVOLVING HUMAN BIOLOGICAL MATERIALS: ETHICAL ISSUES AND POLICY GUIDANCE* 1–2 (1999), available at <https://scholarworks.iupui.edu/handle/1805/22>.

and studied in biobanks.²¹² While some of these individuals knowingly contributed their samples for research purposes, most were unaware at the time of extraction that their tissue or fluids would be banked and used for research purposes.²¹³ Although consent of the source is normally required for research on human biospecimens, anonymization of tissue extinguishes this requirement, thereby freeing the tissue for unconsented use. This extinguishing rule achieves the production of a valuable social good. And while the justification for this rule has never been well theorized, it seems to be justified—at least as a general baseline rule—by the efficient allocation functions that it can perform (which I explored in depth in Part II.C).²¹⁴

However, it is possible that the rule is overbroad in this respect, and it is currently the subject of growing criticism by academics, regulators, and biomedical researchers. Their criticisms are based on three general concerns, each involving what my theory reveals to be a different phase of production. With respect to “creation,” the concern is that the rule is contributing to a growing lack of public trust in biomedical research that will result in a decline in voluntary tissue donations.²¹⁵ With respect to “evaluation,” the concern is that the rule provides incentives to anonymize, which eliminates information that would be valuable in evaluating research results.²¹⁶ And with respect to “allocation,” the concern is that the rule fails to take into account valid ethical interests that tissue sources have in the use of their tissue that exist regardless of anonymization.²¹⁷

Attempts to address these concerns—and provide tissue sources with some rights of control over their tissue—have given rise to a few serious reform proposals. The first is to grant all tissue sources some form of personal or intellectual property right in their tissue that would allow for the imposition of general use restrictions on tissue, regardless of whether the tissue is anonymized.²¹⁸ The second, advanced by the U.S. Department of

212. In 1999, the National Bioethics Advisory Commission (NBAC) estimated that biobanks across the United States housed at least 282 million specimens—from over 176 million individuals—and that over 20 million new samples were being added each year. *See id.*

213. Julia D. Mahoney, *The Market for Human Tissue*, 86 VA. L. REV. 163, 189–90 (2000).

214. *See supra* Part II.C.

215. *E.g.*, Human Subjects Research Protections: Enhancing Protections for Research Subjects and Reducing Burden, Delay, and Ambiguity for Investigators, 76 Fed. Reg. 44,512, 44,523 (July 26, 2011) (to be codified at 21 C.F.R. pts. 50, 56, and 45 C.F.R. pts. 46, 160, 164).

216. *E.g.*, Greely, *supra* note 182.

217. *E.g.*, Natalie Ram, *Assigning Rights and Protecting Interests: Constructing Ethical and Efficient Legal Rights in Human Tissue Research*, 23 HARV. J.L. & TECH. 119, 131–32 (2009).

218. On general property rights, see Feldman, *supra* note 179, at 1381–85; Donna M. Gitter, *Ownership of Human Tissue: A Proposal for Federal Recognition of Human Research Participants' Property Rights in Their Biological Material*, 61 WASH. & LEE L. REV. 257 (2004). On intellectual property rights, see Ram, *supra* note 217, at 143, 152. *See also* Mark A. Hall, *Property, Privacy, and the Pursuit of Interconnected Electronic Medical Records*, 95 IOWA L. REV. 631, 651 (2010).

Health and Human Services in an advanced notice of proposed rulemaking, is to eliminate the current extinguishing rule and require that all research be consented to regardless of anonymization.²¹⁹ The third is to provide this right only to those who opt in to this protection, such that anonymization would generally eliminate the consent requirement, but a tissue source could exercise a right to prevent research regardless of anonymization.

As I argue below, however, all three of these proposals are undesirably overbroad with respect to their core aims. Furthermore, those aims can be achieved and problems can be avoided by adopting the combination of anonymity and attribution rules identified above. Specifically, I propose combining our current extinguishing rule with an entitlement rule granting a right of attribution in one's tissue—a right modeled on the right of attribution of artists under VARA, which likewise attempts to address ethical, identity-based production concerns.²²⁰ This strategy would allow those who care about the use of their tissue to prevent researchers from anonymizing it and using it outside the scope of their consent, but would otherwise leave intact the various production benefits of a regime that allows anonymization to extinguish private rights of control.

In making this argument, I do not take a normative position in the debate over whether tissue sources *should* be given rights of control over their tissue. My argument, here and throughout this article, is about the instrumental value of my framework in achieving a given normative goal. In this case, it provides a completely novel and narrowly tailored way of modifying the current extinguishing rule—one that shares the strengths of the dominant reform proposals while avoiding many of their weaknesses.

b. Possible Solutions

In order to contextualize a key feature of the existing proposals and my alternative, it is worth briefly explaining as a preliminary matter why I have not included private ordering through contract as an option for serious consideration. The reason is that contract law alone will not allow a tissue source to create enforceable use restrictions against researchers who are not party to the contract, and it is highly likely, given the nature of public sector biomedical research, that samples will be transferred to third-party researchers. While the source could create a contract with the original recipient prohibiting such transfers, contractually created limits on the alienation of property are (absent an underlying real or intellectual property

219. See Human Subjects Research Protections: Enhancing Protections for Research Subjects and Reducing Burden, Delay, and Ambiguity for Investigators, 76 Fed. Reg. at 44,523; see also Eriksson & Helgesson, *supra* note 100, at 1073. This position also has significant public support. See, e.g., Evette J. Ludman et al., *Glad You Asked: Participants' Opinions of Re-consent for dbGaP Data Submission*, 5 J. EMP. RES. ON HUM. RES. ETHICS 9 (2010).

220. See, e.g., *Carter v. Helmsley-Spear, Inc.*, 71 F.3d 77, 81 (2d Cir. 1995) (explaining that the right comes from the canon of "moral rights" that recognizes interests of a "non-economic and personal nature").

right) generally unenforceable.²²¹ Further, even if such a clause were enforceable, it would only allow the source to bring a breach of contract claim against the original recipient.

Thus, for someone who wants to impose hard limits on the use of his or her tissue, rights based solely in contract will be ineffective.²²² What this person will need is some form of right that runs with the tissue, such as a right of attribution, a right of control granted by a generally applicable regulation, or a restrictive servitude based on an intellectual or personal property right.

The very feature that makes a restrictive servitude based on a property right desirable when compared to contract, however, makes it problematic in other respects. The first is a problem of overbreadth, as the creation of either type of property right could burden research by requiring pedigree checks on every tissue sample, deter commercial applications by creating uncertainty over legal title, and produce a “tragedy of the anticommons” by allowing millions of tissue sources to negotiate a benefit share.²²³ The second problem is that our law does not allow for the creation of servitudes in personal property,²²⁴ and there are strong efficiency and fairness rationales for this limitation, deriving from considerations of information costs²²⁵ and dead hand control.²²⁶ The third is that, although our law does allow for use restrictions on intellectual property, granting persons

221. See generally RESTATEMENT OF PROP. § 404 (1944).

222. For a discussion of the ways in which law and economics literature ignores this distinctive character of property rights and a critique of this trend, see Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 385 (2001). On the functional distinction between rem and in personam rights, see Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773 (2001).

223. See Jasper Bovenberg, *Whose Tissue Is It Anyway?*, 23 NATURE BIOTECHNOLOGY 929, 931 (2005). On the idea of the anticommons, see Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 624 (1998).

224. Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1, 18–19 (2000) (“[A]lthough the case law is rather thin, it . . . appears that one cannot create servitudes in personal property.”).

225. While mechanisms to ameliorate some of these costs have been developed for real property, they are often inapplicable to personal property. Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885, 914–916 (2008). Further, even if the mechanisms were applicable, the relatively lower value of personal property would often make their use ineffectual or inefficient. *Id.* at 914–16, 932–33; see also Merrill & Smith, *supra* note 224, at 26–34 (discussing “measurement-cost externalities”). But see Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1482–87 (2004) (arguing that information costs do not support prohibition on personal property servitudes).

226. For example, dead hand control undermines the autonomy of present owners, creates obstacles to alienation, and imposes potentially inefficient land-use choices. Van Houweling, *supra* note 225, at 901–03. It is arguable that concerns about the waste of a socially valuable asset have less force when the asset is not as valuable as land, and when the value of the asset will likely decrease dramatically over time, as is the case with many forms of personal property. *Id.* at 921. However, biological tissues are not like disposable consumer goods in that they can be just as valuable for research in the future as they are today, and perhaps even more so.

intellectual property rights in genetic information is normatively and legally problematic for reasons that have been well established in related contexts,²²⁷ as well as practical reasons that have received less attention.²²⁸

Thus, these general property-based solutions pose problems of overbreadth that are avoided by the other solutions (i.e., the modified consent requirements and the right of attribution), each of which is based in generally applicable law that is more narrowly tailored to the problem at hand.

However, the two proposed modifications of the consent requirement are overbroad in other ways. Take, for example, the proposal by the Department of Health and Human Services to replace the current extinguishing rule with a rule requiring that all research be consented to, regardless of anonymization.²²⁹ This rule would likely impose inefficient burdens on research, as it would create significant transaction costs (in obtaining sources' consent) and prevent research (when sources cannot be located) without any benefit in many cases—specifically, all the cases in which the sources would not have objected to the anonymized research. The other regulatory modification would solve this problem by providing a tissue source with the right to *opt in* to the protection, requiring consent for anonymized research only in those cases in which the tissue source required it. But closer examination reveals that even this option provides tissue sources with a right that is arguably too expansive. The reason is that providing tissue sources with a general right to withhold their consent would create an economic incentive to do so—as part of a strategic bargaining strategy—even when they do not object to research on their tissue. Thus, the scope of interventions allowed by the right would not be tailored to the personal, identity-based ethical interests that the reforms seek to recognize by granting tissue sources the right to prevent research on their anonymized samples.

By contrast, granting a VARA-styled right of attribution in tissue would allow sources to in effect “opt out” of the extinguishing rule (by preventing the anonymization of their tissue), but would not create economic incentives to exercise the right as a bargaining chip. The reason for this derives from the fact that property rights can be limited by second-order rules that make persons' *incentives* for exercising a right depend on their *reasons* for doing so,²³⁰ and VARA contains such a rule. The right of

227. For example, there is an extensive literature on the problems of granting property rights in personal information. See, e.g., Mark A. Lemley, *Private Property*, 52 STAN. L. REV. 1545 (2000); Pamela Samuelson, *Privacy As Intellectual Property?*, 52 STAN. L. REV. 1125, 1136–46 (2000). On the problems with respect to *genetic* information specifically, see Suter, *supra* note 101.

228. For example, almost all of one's genetic information is shared by others. Even highly unusual mutations might be shared with siblings or parents. Thus, as a practical matter, it would often be impossible to determine which genetic data is owned by which persons—or groups of persons.

229. See *supra* note 219 and accompanying text.

230. I draw this idea from Lee Fennell, who suggests that inalienability rules allow us to “make the entitlement to engage in a behavior depend on one's reason for wishing to engage

attribution is limited by what can be considered a “sticky default” or “impeding altering rule,”²³¹ under which the right can only be waived through a signed written instrument “specifically identify[ing] the work, and uses of that work, to which the waiver applies.”²³² Applied in the biobank context, such a restriction would often eliminate the economic value of obtaining a waiver, as most research uses of tissue are of little or unknown economic value. For all of these cases, the grant of a right of attribution would satisfy the concerns of those who argue that the law should recognize an individual’s ethical interests in preventing the use of his or her tissue, while at the same time mitigating the possibility that granting such control would lead to strategic holdouts, rent seeking, and an inefficient allocation of tissue for research. Of course, there would be exceptions to this, such as when a specific study on a specific sample is expected to have high value. But for the vast majority of research, the waiver restriction on the right of attribution would provide narrow tailoring that would help satisfy these important conflicting production concerns.²³³

A further benefit of this strategy is that it would work within the normative framework of existing human subjects regulations. Unlike the other options identified, it would not require grounding in a theory that would allow for disassociated rights of control, but rather would adopt the widely accepted idea in our law that persons have a normatively compelling

in it.” Lee Anne Fennell, *Adjusting Alienability*, 122 HARV. L. REV. 1403, 1454 (2009). It seems to me that her statement, while insightful, is not quite right. An inalienability or sticky default rule does not alter the entitlement to engage in a behavior on the basis of one’s reasons; rather, it takes certain incentives off the table.

231. I take these concepts from Ian Ayres, who argues that externalities and paternalistic concerns can justify mandatory restrictions on freedom of contract, but that when these concerns are not sufficient to support mandatory rules, lawmakers can instead create sticky defaults through impeding altering rules that artificially increase the difficulty of opt out. Ian Ayres, *Regulating Opt-Out: An Economic Theory of Altering Rules*, 121 YALE L.J. 2032 (2012).

232. 17 U.S.C. § 106A(e)(1) (2012). The severe restrictions on waiver were a compromise between the Senate, which “was adamant in opposing waiver, believing that if waiver were permitted, artists routinely would be forced to grant waivers, thereby eviscerating the law,” and the House, which recognized such a possibility, but “believed that to prohibit all waivers would ‘inhibit normal commercial practices.’” 5 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 16:37 (2012) (quoting H.R. REP. NO. 101-514, at 18 (1990)).

233. Further, as is often the case with identity-based rights, the right of attribution under VARA is nontransferable, 17 U.S.C. § 106A(d), (e)(1), which in the biobanking context would serve two functions. First, an inalienability rule would prevent others from gaining the benefit of the right. Whereas a general property right in tissue that allowed for the imposition of servitudes could be used for any purpose, the scope of interventions allowed by the right of attribution would be partially tailored to the personal interests that advocates of property rights in tissue want to protect. Second, the restriction would comply with the “nearly unanimous opinion in the medical research and public policy communities that tissue donors should be subject to a no-compensation rule.” Russell Korobkin, *Buying and Selling Human Tissues for Stem Cell Research*, 49 ARIZ. L. REV. 45, 47 (2007) (critiquing this view). While this policy is often justified by reference to concerns about commoditization, see, e.g., Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1855 (1987), it is possible that these moral concerns can be reframed as market externalities. See, e.g., Calabresi & Melamed, *supra* note 154, at 1111–12; Richard A. Epstein, *Why Restrain Alienation?*, 85 COLUM. L. REV. 970, 990 (1985).

interest in limiting the use of their tissue if it is directly identified with them. The right would merely provide those who feel that research on their tissue constitutes a form of research on their person with a way to give legal effect to this form of biological identity, conditioning their control on their willingness to require that their tissue be identified with them.²³⁴

In short, if we are going to modify our law to give legal recognition to tissue sources' ethical interests in preventing the anonymization and use of their tissue, the institutional-design move revealed by my framework—using an entitlement rule to limit an extinguishing rule—would be a completely novel, narrowly tailored, and pragmatically desirable way of doing so. Furthermore, and more importantly, this general strategy of combining anonymity and attribution rules that are in tension with each other (of which I have explored just one of many possible variants)²³⁵ can be applied across our law to develop more refined solutions to production concerns—for goods ranging from campaign contributions²³⁶ to information about criminal activity.²³⁷

234. In addition, because the right of attribution would work within this normative framework that is shared by a variety of other federal and state statutes that allow anonymization to extinguish rights—including the Privacy Act of 1974, 5 U.S.C. § 552a (2012), the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 110 Stat. 1936, and various state statutes that declare genetic information to be the exclusive property of its source—it could be a single intervention that applied broadly if desired. Moreover, it could be granted by the federal government to impact rights under state law, or by a state to impact rights under federal law if not preempted.

235. Other combinations along these lines could include: an anonymity condition combined with an attribution right; an attribution requirement combined with an anonymity right; and an attribution extinguishing rule combined with an anonymity right.

236. In fact, several proposed solutions to the problem of political corruption associated with campaign contributions can be read as employing this strategy, though they have not been framed in these terms. For example, Ayres and Ackerman have proposed altering the current disclosure regime by funneling donations through the FEC and providing donors with a right to an anonymous refund, so that candidates will be unable to determine how much money a donor has given. Bruce Ackerman & Ian Ayres, *The Secret Refund Booth*, 73 U. CHI. L. REV. 1107, 1110–11 (2006). Or alternatively, we might do the reverse, requiring that donations be anonymous as a baseline, but then grant donors a right to partial attribution. Cf. ACKERMAN & AYRES, *supra* note 6, at 93–110 (proposing a variant of this). Categorized in the terms of my framework, each of these proposals would use a combination of two rules—an attribution condition with an anonymity right in the first, and an anonymity condition with an attribution right in the second—to strike a balance between the evaluation-oriented benefits of attributed donations and the creation-oriented benefits of anonymous donations. In this way, each would create a more refined solution than is possible through a single rule alone.

237. In fact, our law arguably already uses one such combination. We allow people to provide police tips anonymously (an entitlement rule targeting the creation of information by altering incentives), but courts have generally held that an anonymously provided tip cannot by itself provide probable cause (a conditioning rule targeting evaluation concerns about the resulting information). See *supra* note 90 and accompanying text. In this way, anonymity and attribution rules that target different phases of production are used in combination to provide a better solution than a single rule alone.

3. Balancing Production

A third institutional-design implication of my analysis is that when we want to incentivize the *creation* of a good for which the source will suffer costs if identified, but a loss of information about the source's identity will impose *evaluation* costs on the public, we can balance these goals by either granting a limited anonymity right or imposing a pseudonymity condition. These two potential strategies can be represented as follows:

	Anonymity	Attribution
Entitlement rule	Anonymity is a right (targeting creation) limited by good cause (targeting evaluation)	
Conditioning rule	Pseudonymity is a condition (targeting both creation and evaluation)	

To demonstrate the value of these two very different strategies, I will in this section focus on their application to a current legal controversy concerning the anonymity and attribution of sperm donors, where policymakers are currently struggling to balance creation- and evaluation-oriented societal goals. On the creation side, the rationale for granting an anonymity right is to allow donors to benefit from any existing incentives to donate, such as compensation or personal satisfaction, while avoiding key costs of doing so. As noted above,²³⁸ anonymity allows them to avoid the imposition of parenthood by the state, which can impose legal parenthood, as well as by their "children" and third parties, who can impose "attributorial parenthood," and the various costs associated with both forms of parenthood.²³⁹ In this way, it operates *ex ante* to facilitate the public availability of a biomedical good for infertile couples.

However, anonymity imposes significant costs *ex post* with respect to evaluation. For example, there are the public costs of providing medical care to children who cannot access their familial medical histories, as well as the costs to children who desire to know their genetic parents. Focusing on these costs, many countries in Europe and the British Commonwealth have recently adopted laws that establish mandatory registries for donors

238. See *supra* note 176 and accompanying text.

239. On the distinction between different types of parenthood (legal, gestational, and genetic), see Cohen, *supra* note 168 and accompanying text.

and provide donor-conceived children with the right to request and receive their donor's name and last-known address once they reach a given age.²⁴⁰ And there is a growing movement to do the same in the United States.²⁴¹

Yet, paying attention to the impact of mandatory registry laws on production *ex ante* reveals a problem in their normative justification. For as Glenn Cohen has demonstrated, the *ex ante* effects make the standard rationale for such laws—to protect the interests of the children produced with donor sperm—run afoul of what is known as the “nonidentity problem.”²⁴² As applied here, the problem arises from the fact that the laws can be expected to cause donors who would have donated anonymously to no longer donate,²⁴³ thus preventing the conception of the particular children that the laws seek to protect (the children of anonymous donors).²⁴⁴ In this way, the laws will effectively “‘protect’ these particular children out of existence,”²⁴⁵ and as a result, the laws cannot be generally justified by a concern for the interests of these children.²⁴⁶ However, as my framework reveals, there are two ways of limiting donors' anonymity rights that address the core public evaluation costs without running afoul of the core problems on the creation side.

The first way of striking a balance between the creation benefits of anonymity and the evaluation benefits of attribution is to use pseudonymity rather than pure anonymity, for as I discussed above, pseudonymity is a type of anonymity that can perform some of the same functions as attribution.²⁴⁷ For example, we could impose a pseudonymity condition on donors, requiring that all of an individual's donations be associated with a pseudonym—potentially just a number—in a national registry that would be untraceable to his actual identity. Because this would not impose any new costs on donors, as most sperm banks already use numerical identifiers, it

240. I. Glenn Cohen, *Rethinking Sperm-Donor Anonymity: Of Changed Selves, Non-identity, and One-Night Stands*, 100 GEO. L.J. 431, 432 (2012).

241. See, e.g., *Making Laws About Making Babies*, N.Y. TIMES (Sept. 13, 2011), <http://www.nytimes.com/roomfordebate/2011/09/13/making-laws-about-making-babies>.

242. See Cohen, *supra* note 41; Cohen, *supra* note 240.

243. The limited empirical evidence suggests that countries that have imposed anonymity prohibitions have experienced significant decreases in donations. Cohen, *supra* note 41, at 463. In some of these countries, this decline has been followed by a rebound, but the evidence suggests that the new donations have come from a different donor demographic. Waldman, *supra* note 183, at 550–56. Thus, although not conclusive as to causation, the evidence supports the inference that anonymity restrictions cause donors who would have donated anonymously to no longer donate.

244. The reduction in donations will not only prevent some persons from procreating at all, but will also impact *with whom* and *when* many other people procreate, both of which also cause a nonidentity problem. Cohen, *supra* note 41, at 462–65. Of course, this will not always be the case. There might be some donor-recipient matches that would be identical under either regime. For the limited group of children produced by these matches, the nonidentity critique of the laws does not apply. *Id.* at 465. Cohen argues, however, that this limited group cannot justify the burdens imposed by the laws. *Id.* at 474–81.

245. Cohen, *supra* note 240, at 436.

246. The only way the children of anonymous donors would benefit from being regulated out of existence is if their lives would have not been worth living, which is not a claim that advocates of the laws make.

247. See *supra* Part I.B.

would not run afoul of creation-oriented concerns, including the nonidentity problem. But by allowing for the centralized *accumulation* of anonymous information about the source—including information about his health history, the identities of the children that were produced with his sperm, and their health outcomes—it would perform many of the same functions as an attribution requirement. For example, it would satisfy the desires of many donor-conceived children to find their half-siblings, and provide information that might be invaluable in their healthcare.²⁴⁸ However, imposing a pseudonymity condition would not perform all of the purposes of requiring attribution; most centrally, it would not allow children to find their genetic parents, which is a goal of many.

Another way of striking a balance between the creation benefits of anonymity and the evaluation benefits of attribution is to provide donor-conceived children with the right to de-anonymize their donors for good cause. Compared to the pseudonymity option, this option has evaluation costs and benefits. For example, it provides more information about the donor when the good cause standard is met (e.g., it would allow for follow-up inquiries into the donor's familial health history that might be relevant to providing medical care to the donor-conceived child), but provides no information in cases where the standard is not met. On the creation side, this option would expose donors to the risk of de-anonymization and thus would likely disincentivize some donations. However, it would avoid the nonidentity problem if the right were not granted prospectively to *resulting* children (as is often proposed), but rather only retroactively to *existing* children who demonstrate to a judge an interest in knowing their parents' identities. For under this rule, the children whose interests would justify the grant of the right would be identical to the children whose interests would be served by it.²⁴⁹

Furthermore, sperm donation is just one area in which this strategy of combining rules can help solve difficult questions of policy. Across our law—in areas ranging from the protection of free speech to the public circulation of health records—we can find situations in which imposing an attribution condition will be normatively and instrumentally undesirable because of its impact on the creation of goods *ex ante*, but anonymity will impose significant evaluation costs on the public *ex post*. In these situations, we might be able to strike a balance between these concerns by

248. In addition, in the rare case, it would prevent unintended incest between half-siblings. See Naomi Cahn, *Accidental Incest: Drawing the Line—or the Curtain?—for Reproductive Technology*, 32 HARV. J.L. & GENDER 59 (2009).

249. Of course, the retroactive grant of the right to existing children might alter which future children come into existence. For example, a potential sperm donor might not donate out of concern that in the future a child conceived with his sperm will be granted a right to discover his identity. But this does not pose a nonidentity problem, for any child who is in existence can—regardless of the causal chain that produced him—have a real interest in knowing his biological parents' identities. Any contrary claim would entail a metaphysical conception of interests that is incompatible with our law's conception. I recognize, however, that this retroactive option might be rejected by some on grounds of fairness, which is why advocates of the registry laws generally advocate for prospective application.

either imposing a pseudonymity condition that is generally applicable, or granting an anonymity right limited by an individual showing of good cause.

B. The Production of Liberal Legal Subjects

Having demonstrated three key practical implications of my analysis for institutional design, I will now turn briefly to a broader point about the application of my framework. While I have thus far argued that multiple mutually exclusive types and combinations of anonymity rules can be used to address the same problem of production, the rules are of course not equivalent in every way. A key difference derives from the fact that the subject matter of the rules is not always left unaltered by their use. Different configurations of rules may instantiate different conceptions of the goods being produced—and of the subjects producing them. As with privacy rules, the choice and design of anonymity rules shapes the self and society.²⁵⁰ While this aspect of production is one that will require separate treatment in another article, I will briefly sketch two examples of its connection to my framework here, thereby returning to the relationship between anonymity and the liberal legal subject with which I began.

In the elections example that I discussed above, for example, I suggested—following Mill—that we might use an attribution condition, instead of an anonymity condition, to prevent corruption in voting. However, the use of an attribution requirement might bring with it a shift in how the nature of voting is commonly understood. For example, Mill conceptualized voting in very different terms than many people do today. As noted in the introduction to this Article, he thought that the vote is not given to the subject of a democracy “for himself; for his particular use and benefit,” but rather “as a trust for the public.”²⁵¹ Thus, although two opposite conditioning rules might both prevent the same forms of corruption, they might produce very different types of democratic subjects.

Anonymity and attribution conditions for voting can in fact be seen as representative of the two ends of the spectrum of modern views regarding the nature and function of democracy. There is a resemblance between Mill’s attribution position and theories of deliberative democracy, which emphasize the giving of public reasons. These theories, rooted historically in republicanism, “contend that an expression of the public will can legitimately bind those who are subject to it only insofar as it is reasoned, well-informed, and formulated after mutual consultation and discussion.”²⁵² By contrast, economic theories rooted in liberalism see voting as “a procedure for maximizing social utility by recording and aggregating as

250. Peter Galison & Martha Minow, *Our Privacy, Ourselves in the Age of Technological Intrusions*, in HUMAN RIGHTS IN THE “WAR ON TERROR” 258, 277–284 (Richard Ashby Wilson ed., 2005) (discussing the relationship between constructions of privacy, the self, and society).

251. MILL, *supra* note 1, at 190.

252. Gardner, *supra* note 11, at 935.

accurately as possible the private self-interest of each citizen.”²⁵³ On this view, it is the impersonal operation of democracy’s aggregating mechanisms that achieves the common good, not self-conscious attempts by individuals to determine how to advance it. Imposing anonymity as a condition can be seen as expressive of this latter privately oriented approach.

This is not to say, however, that imposing an anonymity requirement on voting treats the vote as a completely private good. There are other anonymity rules that would push the vote further into the domain of private choice. For example, creating a *right* of anonymity (as is the case in some jurisdictions) moves away from the publicly oriented rationale articulated by the Supreme Court of Massachusetts when it held that because ballot secrecy “safeguards society’s interest in the integrity of elections, . . . the right to a secret ballot *is not an individual right* which may be waived by a good faith voter.”²⁵⁴ If anonymity were a right, rather than a requirement, the voter would be able to choose anonymity to avoid accountability, or choose attribution to sell his vote.

For these reasons, the act of choosing between an anonymity right and an anonymity requirement, or between an anonymity requirement and an attribution requirement, should be seen as a choice between competing conceptions of what type of good a vote is meant to be, and what voting is for.²⁵⁵ And the same is true of the production of biomedical goods.

With research biobanking, for example, the choice of anonymity rule will determine whether a biobanked tissue sample is a good in which the human subject has a legally cognizable interest, or is instead one in which the only cognizable interests are those of the public. Under the current federal Common Rule regulations, anonymization of the tissue transforms it from a limited-use resource under the ultimate control of a private party, into an unlimited-use resource that is available to public sector research.²⁵⁶ Under the right of attribution strategy explored above, by contrast, the human subject would be able to prevent this shift and maintain a private property interest in his tissue, transforming his genetic endowment into private biocapital to be utilized like other forms of capital.²⁵⁷

253. *Id.* at 934.

254. *McCavitt v. Registrars of Voters*, 434 N.E.2d 620, 631 (Mass. 1982) (emphasis added).

255. Likewise, if we were to impose an anonymity condition on the hiring of experts to testify in court, we would—at least in part—be transforming expert testimony from a private good deployed in the service of one litigant’s personal goal of winning, to “a self-financing public good for litigants to use in serving their private and the public interests.” Robertson, *supra* note 199, at 242. And if we were to impose an anonymity condition on political donations, we would be transforming them from a good potentially deployed in the service of private quid pro quo, into a good in service of public campaign finance.

256. *See supra* notes 95–98 and accompanying text.

257. On biocapital and biobanks, see Peter Lee, *Toward a Distributive Commons in Patent Law*, 2009 WIS. L. REV. 917, 986–992. *See also generally* KAUSHIK SUNDER RAJAN, *BIOCAPITAL: THE CONSTITUTION OF POSTGENOMIC LIFE* 3–7 (2006).

Underlying these competing conceptions of the status of tissue are, moreover, competing conceptions of the human subject and the role that nonexpert citizens should have in shaping the direction of biomedicine. The Common Rule's transformation of tissue from a private to public good is explicitly achieved through a legal reconceptualization of the human subject from whom the tissue is derived. Prior to anonymization, the law treats research on biobanked tissue as research on a human subject for which consent is required; post anonymization, there is—as a matter of law—no longer a human subject involved. The right of attribution strategy, by contrast, would allow a human subject to ensure that his biobanked tissue remained not only literally identified with him, but also an extension of his legal self. Under this approach, human subjects would be more than mere donors to the public sector research enterprise, but rather—if they chose—participants in it.²⁵⁸

Thus, choosing between anonymity and attribution rules may involve not only taking a position on the proper balancing of considerations of efficiency and justice, but also a more fundamental choice between what might be considered competing bioconstitutional orders.²⁵⁹ At its core, the decision of whether ordinary citizens will be able to shape the direction of public sector biomedical research with their biocapital (rather than a more limited bundle of resources, such as money, energy, time, and voice) is much like the decision of whether they will be able to shape political outcomes by voting openly with their voices and their financial capital (rather than in anonymizing voting and donation booths). Both decisions entail choices between competing conceptions of the proper capacities of the subjects of a liberal democracy.

CONCLUSION

In this Article, I have demonstrated that anonymity has been misconceived as an aspect of privacy, and as a result, its distinct and powerful role in our law has gone unrecognized. Differentiating the two concepts, I have argued that whereas privacy hides facts about someone whose identity is known, often by removing information and other goods from public circulation, anonymity hides the identity of someone about whom facts are known, often for the purpose of putting such goods into public circulation.

Building on this distinction, I have demonstrated that anonymity and attribution rules perform a previously unrecognized and pervasive role in our law's production of goods—in domains ranging from contract and copyright, to criminal law and constitutional law. And I have proposed an instrumental taxonomy of the three core forms that these rules take,

258. This is, of course, not the only way to achieve this result. For very different proposals, see Kris Saha & J. Benjamin Hurlbut, *Treat Donors As Partners in Biobank Research*, 478 NATURE 312 (2011), and David E. Winickoff & Richard N. Winickoff, *The Charitable Trust As a Model for Genomic Biobanks*, 349 NEW ENG. J. MED. 1180 (2003).

259. On bioconstitutionalism generally, see the collection of essays in REFRAMING RIGHTS: BIOCONSTITUTIONALISM IN THE GENETIC AGE (Sheila Jasanoff ed., 2011).

showing that production functions are achieved not only by making anonymity and attribution into rights, but also conditions of exercising rights, and most surprisingly, triggers that extinguish rights.

While our law's uses of these varied rules have often been unreflective, I have argued that they can be generally explained by a theory that identifies their common impacts on three phases in the production of goods: creation, evaluation, and allocation. Specifically, I have identified how the rules allow us to shape the costs and benefits of creating goods in order to align private incentives with public goals and values, control information flows in order to address evaluation costs associated with using goods that have been created, and alter rights of control over goods in order to achieve their efficient or fair allocation.

Furthermore, and most importantly, I have demonstrated that my taxonomy and theory together provide a framework for institutional design that can be invaluable in rethinking and revising our law. Focusing on a handful of difficult and pressing questions concerning the production of specific biomedical and democratic goods, I have shown that my analysis reveals a previously unrecognized set of institutional design levers and valuable lessons in their use, each of which can be applied more generally in the development of law and policy. In addition, I have suggested that although multiple combinations of rules can be used to address the same problem of production, the different options are not always functionally equivalent in every way. Rather, they can instantiate competing conceptions of the nature of the goods being produced, and of the proper legal capacities of the subjects of a liberal democracy—a possibility that raises rich normative questions that I have by necessity set aside for future treatment.