Regulating Opt Out: An Economic Theory of Altering Rules

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Ian Ayres*

Abstract: Whenever a rule is contractible, the law must establish separate rules governing how private parties can contract around the default legal treatment. To date, contract theorists have not developed satisfying theories for how optimally to set “altering rules,” the rules that set out the necessary and sufficient conditions for displacing a default. This Article argues that efficiency-minded lawmakers in setting altering rules should consider both the costs of altering and the costs of various kinds of error. There are two broad reasons for altering rules to deviate from attempts to minimize the transaction cost of altering. First, the Article develops theoretical conditions when minimizing the costs of party error (especially non-drafter error) and third-party error (especially judicial error) will be paramount. The Article proposes a variety of specific altering interventions – including “train and test” altering rules, “arbitrary” altering rules, and “thought-requiring” altering rules that might be deployed to reduce altering error. Second, when externalities or paternalism concerns are insufficient to justify a full-blown mandatory rule, lawmakers might usefully impose “impeding” altering rules which deter subsets of contractors from contracting for legally dispreferred provisions. Impeding altering rules produce an intermediate category of “quasi-mandatory” or “sticky default” rule which manage but do not eliminate externalities and paternalism concerns. These two deviations from transaction-cost minimization can often be usefully complemented by what this Article calls “altering penalties” which penalize one or both contractors who utilize dispreferred altering methods. Specifically, altering penalties can channel contractors’ altering efforts toward means that better reduce error or better control externalities or paternalism. More explicitly theorizing altering rules as a distinct category of law can make visible legal issues that have largely gone unnoticed and lead toward the development of more defensible choices about how best to regulate opt out.

*William K. Townsend Professor, Yale Law School. Tara Ayres, Laura Femino, Rob Gertner, Marty Kane, Pat Kane, Samuel Oliker-Friedland, Matthew Sag, Alan Schwartz, Peter Siegelman and seminar participants at Loyola University Chicago, School of Law provided helpful comments. Sam Lim, Joshua Mitts and Wendy Zupac provided excellent research assistance.
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Ian Ayres*

I. Introduction

A default-centric vision of contract law must provide answers for three core questions:
(1) Should particular rules be mandatory or contractible?
(2) If contractible, what should the default be? And finally,
(3) If contractible, how should contractors be able to contract around the default?¹

The history of modern contract theory can be seen as marching sequentially through these three questions. I can still remember in 1988 attending an important conference at Columbia which focused solely on when and whether corporate rules should be contractible.² In the first stage academics asked whether legal rules should be default or mandatory, but paid little attention to the second or third questions. At the time, it was implicitly or explicitly assumed that the answer to the second question was that efficient default rules should be set so as to provide the types of contractual provisions that the parties would have contracted for themselves.

Rob Gertner and I (both following and followed by a host of others) helped to complicate the answer to the second question by suggesting a number of reasons why optimal default setting should diverge from the simple majoritarian or hypothetical contracting approach.³ This second stage of analysis has been in full bloom for more

¹ Ian Ayres, Empire or Residue: Competing Visions of the Contractual Canon, 26 FLA. ST. U. L. REV. 897 (1999).
than two decades – with hundreds of articles explicitly considering whether “information forcing” or “penalty” defaults might be preferable to various alternatives.\(^4\)

The progress that has been made in theorizing how best to set default rules is all to the good. But it is long past time that we turn our attention to the third core question of a default-centric approach to contract law. It is time to ask the “how” question. How should the law regulate parties’ means of contracting around a default? What should be the necessary and sufficient conditions for displacing a default provision with some other provision?

Contract theory at a moment is at a stage of development with regard to this third question that parallels in several aspects the moment in the early 1980s when we began thinking about the second question. The parallels concern linguistics and pedagogy as well as an absence of explicit theories and the reliance on half-articulated folk theorems.

A. Terminological Parallels

It has been difficult to ask the third question of how best to displace a default in part because we are still linguistically impoverished in ways that parallel the state of the art a quarter of a century ago with regard to the second-stage analysis. It is hard to believe, but in the early 1980s there was not a well-accepted terminology for distinguishing between rules that could be contracted around and those that could not. Almost no one used (or even knew that Karl Llewellyn had used) the terms “iron” and “yielding” rules to describe the mandatory/default dichotomy.\(^5\) Contract articles that proposed or defended particular legal rules rarely mentioned whether the proposal was privately contractible or not. When the default concept was mentioned, authors were forced to express the idea with a variety of non-standard phrases, including background rules, backstop rules, and jus dispositivum.\(^6\)

This same lack of basic terminology hinders the ability to attack the third question. We do not really know what to call rules that govern how one contracts around the default. I propose that we call them “altering rules.” Altering rules are the necessary and sufficient conditions for displacing a default legal treatment with some particular other legal treatment. There will be different altering rules for each alternative to the default. An altering rule in essence says that if contractors say or do this, they will achieve a particular contractual result.

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\(^6\) See, e.g., John H. Langbein, The Nonprobate Revolution and the Future of the Law of Succession, 97 HARV. L. REV. 1108, 1134 (1984). I still remember being asked by Stan Henderson to remove the term “default rule” from my first presentation to the AALS on the subject, because he felt that the phrase would be confusing to the contract section members. Even the terminology for the concept of a “mandatory” (i.e., non-displaceable) rule had not been settled. In our original article, Gertner and I favored the term “immutable” to describe rules that could not be privately reordered, but common usage has much more embraced the term “mandatory.” A Westlaw search of “immutable rule” found 340 articles, but 2204 articles using the term “mandatory rule.”
An altering rule is a necessary condition if the altering rule specifies that a sine qua non for the parties’ achieving an alternative treatment is to include a particular set of words or processes. For example, the Uniform Commercial Code ordains that “to exclude or modify the implied warranty of merchantability . . . the language [of the contract] must mention merchantability.”\(^7\) Necessary altering rules specify the exclusive means of achieving particular non-default alternatives. In other contexts, however, altering rules allow multiple, non-exclusive means of displacement – one of which would be sufficient to achieve a particular non-default alternative. Indeed, in most contexts there are multiple routes to particular default alternatives.

Altering rules, like defaults, can also vary in terms of their specificity, with the result that we could have “altering standards” as well as “altering rules.”\(^8\) As with other aspects of law, an altering standard would be displacements conditions that were not as clearly specified ex ante.\(^9\) A requirement for default displacement that contract language must express an alternative intent that would be “reasonably understandable by a member of the interpretive community” would constitute an altering standard. In contrast, a requirement that particular magic words must be used would constitute an altering rule. Like defaults, altering rules can be created by statute or common law. When a judicial decision, such as *Jacob & Youngs v. Kent*, determines that a particular contractual attempt is insufficient to displace a default,\(^10\) that decision is helping to specify the contours of altering rules. When the U.C.C. says that an offer invites acceptance by any reasonable means “[u]nless otherwise unambiguously indicated by the language or circumstances,”\(^11\) it is helping to specify the contours of altering rules.

Like defaults, altering rules can be untailored or tailored. Untailored altering rules provide an off-the-rack mechanism that any set of contracting parties can use to displace a default. In contrast, tailored altering rules provide different displacement conditions for different parties. For example, a Thai restaurant that I frequent seems to require non-Asian customers to use different words than Asian customers to obtain truly spicy food. The altering rules of the restaurant are tailored because different customers have to do different things to displace the non-spicy default.

**B. Software Parallels**

To fully describe an altering rule, one must also know whether the altering rules are themselves mutable. That is, one must know whether it is possible for contractual parties to establish a meta or overarching contract that changes what is necessary and

\(^7\) U.C.C. § 2-316(2) (2003). U.C.C. § 2-316(3), however, provides another mechanism for excluding the warranty of merchantability (for example, by saying that the product is offered “with all faults” – thus rendering the warranty of merchantability a non-necessary altering rule.

\(^8\) One could imagine that either necessary or sufficient conditions could be formulated as either rules or standards.


\(^10\) *Jacob & Youngs v. Kent*, 129 N.E. 889 (N.Y. 1921); see also Ayres, supra note 1 at 905 (discussing requirements to contract around default contractual provisions).

\(^11\) U.C.C. § 2-206(1).
sufficient to contract around a default. Just as contractual parties are able to change the default legal meaning of silence,\textsuperscript{12} the law might allow contractual parties to change the mechanism by which they contract around a default. For example, in the cotton industry, the signatories to the Southern Mill Rules can provide for shipment “within fourteen business days from date of sale” merely by including the phrase “for prompt shipment” in their contract.\textsuperscript{13} The possible mutability of altering rules in contract law parallels the mutability of some altering rules in computer software. As we will see in a later section analyzing Microsoft’s User Experience (UX) Interaction Guidelines,\textsuperscript{14} the practice of programming altering rules into computer software illuminates many of the issues that will be discussed in this paper. I analyze Microsoft’s UX guidelines not because they are authoritative or presumptively optimal. Indeed, I will ultimately argue that some of Microsoft’s altering rules are likely to be inefficient.

Just as computer programming helped illuminate the initial second-stage debate (after all, the term “default” is derived from computer practice), thinking about computer programming can inform our thinking about “altering rules.” For example, in computer programming, some altering rules are themselves mutable (defaults), while others are not mutable (mandatory). In Microsoft’s operating system Windows, there is generally a mandatory two-click altering rule to delete a highlighted file from a folder (for example, by first pressing delete on a highlighted file, and then pressing “yes” in response to a confirmation box asking “Are you sure you want to delete this file?”). But in Microsoft’s email software, Outlook, the analogous two-click altering rule to open an email attachment is itself merely a default. By default you must first click on the attachment and then click on a button in a confirmation window (warning you that “[y]ou should only open attachments from a trustworthy source.”) But the confirmation window includes a pre-checked box indicating “[a]lways ask before opening this type of file.” By unchecking the box, Outlook users can alter the prospective altering rule from two clicks to one click.

Through this software lens, we can thus see that altering rules are a kind of second-order rule that share many of the same features of first-order defaults. Indeed, the default nature of some second-order altering rules means that there must be third-order altering rules that govern how you can modify the second-order altering rules. In the case of Microsoft Outlook attachments, this third-order rule is the unchecking of the prechecked box to indicate that you no longer to view such (second-order) confirmation. As of yet, I have never encountered a computer software with a fourth-order altering rule. But one can certainly imagine that a third-order altering rule itself might be a default with

\textsuperscript{12} See Barnett, supra note 3, at 821-22.
attendant fourth-order mechanisms. More generally, there will continue to be altering rules of increasing higher orders until the law reaches a level at which the altering rule for that level is itself non-alterable.

An important dissimilarity between software and contracts concerns the number of people doing the altering. In the standard case, the action of a single computer user is sufficient to displace a software default. But contract law usually requires that all parties to a contract consent to the default alteration. Yet even here the two contexts are closer than they first appear. Some contractual defaults are displaceable by individual contractors. For example, the Restatement (Second) of Contracts §39(2) provides: “An offeree’s power of acceptance is terminated by his making of a counteroffer unless the offeror has manifested a contrary intention or unless the counter-offer manifests a contrary intention of the offeree.”

Sometimes the question of who must take altering action varies by jurisdiction. For example, there is a default rule in criminal law that a telephone conversation cannot be privately recorded. Some states have an altering rule making the recording lawful if all of the recorded parties consent, while other states allow recording if a single party to the conversation consents.

More often than in the computer context, lawmakers in crafting altering rules should attend to the “who” question – who needs to take or consent to the altering actions. We will see this is naturally the case when the law is particularly concerned with reducing party-error by making sure that the non-drafter is informed of non-default terms.

C. Pedagogical Parallels

To know the law and to be a competent lawyer, one must have descriptive knowledge of whether particular rules are alterable and, if so, how they might be altered. But classes in contracts and corporations frequently fail to teach altering rules. This pedagogical failure to instruct how to contract around defaults parallels an earlier failure to teach whether rules are merely defaults. When I went to the law school in the mid-1980s, my contracts and corporations courses taught me dozens upon dozens of contractual rules, but almost never taught me whether a particular rule could be altered by

15 For example, when a user of Outlook unchecks the box (indicating a desire not see confirmation windows again), a window might pop up asking “Are you sure you never want to be asked again to confirm opening an attachment?” and also giving the user the option of not seeing this (third-order) confirmation screen. The confirmation that you want to forego future confirmation would be a third-order rule, while the option of forgoing future third-order confirmation would be a fourth-order rule.

16 The theoretical possibility of altering rules of increasingly higher order (which are only ended by an ultimate mandatory order), parallels the possible higher-order liability regimes discussed in Ian Ayres, OPTIONAL LAW: THE STRUCTURE OF LEGAL ENTITLEMENTS (2005) and Ian Ayres & Jack Balkin, Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond, 106 YALE L.J. 703 (1996).


18 Compare CAL. PENAL CODE § 632 (West 2011) (criminalizing recording “confidential communication” such as a telephone call without the consent of all parties) with N.Y. PENAL LAW § 250 (McKinney 2003) (defining criminal wiretapping as “the intentional . . . recording of a telephonic . . . communication by a person other than a sender or receiver thereof, without the consent of either the sender or receiver”).

19 See discussion infra Subsection I.F.i.
private action.20 Today many professors (and virtually all contract casebooks) give more emphasis to distinguishing between mandatory and default rules.21 But professors still do not systematically emphasize with any kind of particularity how to contract around the default. One could imagine casebooks that systematically included language that would have allowed the losing party to win.22 You cannot be a well-informed transactional lawyer if you do not know the answer to the three central default questions: “What is the presumptive legal rule?” “Can it be changed?” and, “How can I change it?” To master the positive law of altering, one would need to inquire about the host of different questions (summarized below in Table 1) governing the conditions for achieving alternative legal treatments:

<table>
<thead>
<tr>
<th>Table 1: Dimensions of Altering Rules</th>
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<tbody>
<tr>
<td>Exclusivity: Are the conditions for displacement necessary/sufficient?</td>
</tr>
<tr>
<td>Ex ante Specificity: Are the conditions for displacement rules or standards?</td>
</tr>
<tr>
<td>Tailored: Are the conditions for displacement contingent on party characteristics?</td>
</tr>
<tr>
<td>Numerosity: Can the default be displace unilaterally by a single contractor or is the consent of all contractors necessary?</td>
</tr>
<tr>
<td>Mutability: Are the conditions for altering themselves displaceable?</td>
</tr>
</tbody>
</table>

D. Theory Parallels

Finally, there is also a parallel between the current state of academic theory regarding altering rules and the state of theory that existed regarding defaults in the early 1980s. When Gertner and I first started asking about default rule setting, scholars without much explicit theorizing accepted and sometimes explicitly espoused one-sentence folk theorems that default rules should be set at what parties wanted. The parallel here is that the normative case for setting altering rules is under-theorized. Most articles advocating a particular (first-order) default fail to defend the optimality of particular means to displace the default.23 Many articles proposing defaults fail even to address what the altering rules should be to achieve the displacement of a proposed default.24 There is, however, one huge body of literature that is very much related to “altering rules.” It is literature concerning theories of interpretation. In an important sense, all contractual interpretation can be seen as asking whether the parties opted around a default of no contract or no duty. But I want to argue that there is value in thinking about altering rules as a separate (or potentially sub-) category of interpretation.

20 The counteroffer rule is contractible – unilaterally by either the offeror or the offeree.
21 But there is still not a systematic treatment in either the Restatement, the U.C.C. or in casebooks detailing on a rule-by-rule and case-by-case basis which rules and holdings are merely defaults.
22 Maybe this will become a task for the next edition of my contracts textbook. IAN AYRES & RICHARD E. SPEIDEL, STUDIES IN CONTRACT LAW (7th ed. 2008).
24 Again, some of my scholarship is exemplary. See Ayres & Gertner, Strategic Contractual Inefficiency, supra note 3.
Developing a distinct theory of optimal altering rules is likely to lead to a different normative analysis than an interpretation theory which simply seeks to maximize contractor autonomy. There is a payoff in developing a satisfying altering taxonomy that enriches lawmakers’ choice of tools. Indeed, this Article has already suggested an initial taxonomy by proposing the following dichotomies which describe dimensions along which altering rules must be defined: necessary/sufficient, rule/standard, mandatory/default, unilateral/bilateral. Purely as a definitional matter, an altering rule must be describable in these terms (for example, as being rule-like or standard like).

Beyond a mere descriptive cataloging, this Article attempts to provide a theory of what altering rules can do to enhance contractual efficiency and equity. More specifically, I will argue that altering rules should at times deviate from simple transaction cost-minimization because of either i) information concerns with poorly informed contractors or judges; or ii) non-informational concerns about protecting people inside or outside the contract. I will propose a number of different altering rules (including “train and test” altering rules, “arbitrary” altering rules, “thought-requiring” altering rules) that can reduce errors by contractors – especially non-drafting parties – in mistakenly consenting to unwanted opt-out as well as judicial errors in trying to ascertain the meaning of attempted opt-out. This error-reduction project is driven by a kind of “soft” or “libertarian” paternalism – an attempt to use altering rules to facilitate allowing contracting parties to choose the default or non-default options that they jointly prefer. Soft paternalism also can justify what I will call “altering penalties” – which penalize drafting parties who fail to provide adequate information when they opt-out. By analyzing “competition enhancing” altering rules, this Article will show that altering penalties can be used not only to give non-drafters information about the terms of the contract, but also information about the competitiveness of those contract terms. More generally, soft paternalism arguments help show why contractors as a class would at times want altering rules to deviate from simply minimizing transaction costs.

This Article will show that deviations from minimizing transaction cost can also be justified by lawmakers concerns with externalities and hard-paternalism – the standard justifications for mandatory rules. Instead of prohibiting opt-out, lawmakers at times should intentionally discourage (but not prohibit) private parties’ efforts to contract around a default. Altering rules which artificially impede opt out can produce “sticky defaults” which manage and restrain negative externalities and internalities, while simultaneously limiting opt-out for the highest valuers. Sticky defaults of this kind create

25 Madeline Morris and Saul Levmore have helped on this project with regard to various exotic forms of liability rules. See Madeline Morris, The Structure of Entitlements, 78 CORNELL L. REV. 822 (1993); Saul Levmore, Unifying Remedies: Property Rules, Liability Rules, and Startling Rules, 106 YALE L.J. 2149 (1997).
26 See infra Section III.B; see generally Cass R. Sunstein & Richard H. Thaler, Libertarian Paternalism Is Not an Oxymoron, 70 U. Chi. L. REV. 1159 (2003) (arguing that libertarian paternalism is a coherent theory that “respect[s] freedom of choice” while influencing behavior through “default rules, framing effects, and starting points”).
27 See Ayres & Gertner, Filling Gaps, supra note 3, at 88.
28 I first introduced the term “sticky default” in Ayres, Empire or Residue, supra note 1 at 907. See also Ayres & Gertner, Filling Gaps in Incomplete Contracts, supra note 3, at 125 (using the less helpful term “strong” default). A recent Westlaw search indicates that the term has been now used in fifty-three articles. But this article will provide a fuller justification for when stickiness is (in)appropriate.
an intermediate form of contractibility falling between traditional mandatory and default rules.

Finally, this Article will argue that a more conscious understanding of altering rules can inform other areas of law that fall outside of the traditional contractual canon, including civil rights and constitutional law. For example, once we see that altering rules can be tailored to impose different altering requirements for different contracting parties, we can more easily identify instances where altering rules discriminate on the basis of race or gender. More crisply delineating the difference between discriminatory defaults and discriminatory altering rules allows a more refined evaluation of whether discrimination within a regime of contractual freedom should be actionable.

The remainder of this Article is divided into four parts. Part II lays out the fundamental tradeoff between minimizing altering costs and minimizing error. It shows that just as software programmers are willing to trade off higher altering costs for lower altering error, so too lawmakers should at times increase the cost of altering to provide safeguards against courts or the parties themselves misinterpreting the contractual duties. Part III builds on this insight to describe a broader range of sticky defaults in which lawmakers intentionally increase the difficulty of displacing defaults to respond to problems of externalities or paternalism. Part IV argues that lawmakers at time should penalize the parties (usually the drafting the party) by imposing interpretations of terms to which the parties would not have explicitly agreed as a response to altering the method that the party used to achieve another result. Finally, Part V shows how explicitly thinking about altering rules can illuminate unexamined aspects of Section 1981’s prohibition against race discrimination in contracting and even constitutional questions concerning privacy and equal protection.

II. Minimizing Cost versus Minimizing Error

All rules of contractual interpretation are kinds of altering rules. Canons of interpretations must determine what legal effects (including no effect) will be given to particular (contractual) actions. Algebraically, one could think of interpretation as a function, \( f() \), that relates actions of contractual parties, \( a \), and the surrounding circumstances or contexts, \( c \), to particular legal effects, \( e \):

\[
e = f(a, c),
\]

It is the province of interpretation (or altering) rules to determine which actions and which contexts will be legally relevant, in the sense of impacting the rights and duties that would flow from a contract. While this broad definition of altering rules as being co-extensive with all contractual interpretation is coherent, it renders the domain of altering rules too abstractly to provide much value. Instead, it is useful to think of altering rules as the rules that displace particular defaults. Seen as such, the law of altering rules is a subset of interpretation. The larger law of interpretation governs the broad array of circumstances where the parties are displacing a blank no right/no duty with some idiosyncratic, non-modular rights/duties. For example, if Bisko is contracting to buy industrial ovens from Smirgo, Smirgo would ordinarily have no duty to paint the ovens green or integrate an iPod music system into the controls. Provisions inserted into the contract potentially calling for such features would need to be interpreted to impose

29 See Ayres & Speidel, supra note 22, at 222-223.
duties for attributes (creating corresponding entitlements in Bisko). The law of interpretation surely represents a kind of altering rule, because the court would have to determine whether the contractual provisions (together with other contractor actions and context) are effective at displacing the no duty/no right default with regard to these attributes. But for the most part this Article will be focused on circumstances where either the default potentially being displaced is not blank or where there is a small set of sought-after alternatives to the default. In the former category, I would place altering rules determining the displacement of implicit warranties. In the latter, I would place altering rules determining when an employment contract displaces an “at will” default with “just cause” protection.

Altering rules as a subcategory of interpretation are also more often concerned with the necessary elements for displacement. As shown in Table 2, it is possible to think of altering rules as arrayed across a 2 x 2 box:

<table>
<thead>
<tr>
<th>Necessary</th>
<th>Sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>“Mother, May I”</td>
</tr>
<tr>
<td>No</td>
<td>“Merchantability”</td>
</tr>
</tbody>
</table>

At one extreme, the law of altering rules might specify “clear statement” rules – such as what Nick Rosencrantz refers to as the classic “Mother, May I” examples – which represent the exclusive means of achieving a particular legal effect. Alternatively, the law might require certain magic words (such as the U.C.C.’s requirement of “merchantability”) as a necessary but not sufficient condition for displacement.\footnote{For a comparison to statutory interpretation, see 1 Laurence H. Tribe, American Constitutional Law § 2-3, at 125-26 n.1 (3d ed. 2000) (“The interpretive rules set forth in the McCarran-Ferguson Act and RFRA purport to require future Congresses to include specific references – to the insurance business or to RFRA itself, respectively – in order for statutes to bear particular meanings.”)} In contrast to these necessary conditions for default displacement, the broader law of interpretation more normally asks whether particular contractual actions are sufficient to displace the pre-existing default. Thus, a court called upon to interpret the hypothetical Smirgo/Bisko oven contract would ask whether the particular contractual conditions (potentially combined with other contractual actions and circumstances) were sufficient to create the duties/entitlements at issue. From this perspective, Cardozo’s decision in Jacob & Youngs v. Kent is a determination that the contractors’ actions were insufficient to contract around the substantial performance (default) rule.\footnote{Jacob & Youngs v. Kent, 129 N.E. 889 (N.Y. 1921).} The dividing line between an altering rule and the broader category of interpretive rules, is, however, not precise. Some sufficiency rules – such as the U.C.C. rule establishing that the use of “expressions like ‘as is’, [or] ‘with all faults’” is sufficient to displace all implied warranties\footnote{U.C.C. § 2-316(3)(a).} – are usefully interpreted as altering rules. And the accretion of precedent over time may transform interpretive decisions into altering rules. For example, if a court holds that the particular wording of a poison pill contract is
sufficient to be given a desired legal effect,\textsuperscript{33} subsequent parties may intentionally adopt the same language in order to achieve the same result. Thus, the development of boilerplate can transform an interpretive rule into what might be viewed as an altering rule. But again, there is some overlap, and instead of fixating on whether a particular rule should be categorized as an altering rule as opposed to a more generalized rule of interpretation, the focus of this Article is instead on whether particular actions should be deemed necessary or sufficient conditions for achieving a particular alternative to a given default. For example, whether or not \textit{Jacob & Youngs} is considered a decision about altering or interpretation rules, I will argue that the normative analysis in this Article can inform and ultimately challenge part of Cardozo’s reasoning.

A. Altering Rules Distinguished From Menus

The tool of specifying altering rules that are sufficient to achieve specific alternative consequences is related to the choice of lawmakers as to whether to provide legal menus. Just as a restaurant menu specifies food and drink items that might be ordered, a legal menu specifies legal items – bundles of legal rights and duties that might be chosen as an alternative to some default treatment. As I wrote in \textit{Menus Matter}, “[a] menu . . . is a nexus of at least two simultaneous offers. This simple definition comports with common restaurant usage. You can order bacon or ham or nothing at all.”\textsuperscript{34} A legal menu can be conceived as express simultaneous offers – where lawmakers are the offerors and potential contractors are the offerees. More specifically, it is the explicit specification of discrete default alternatives that distinguishes legal menus from the implicit menus that laissez-faire contracting regimes provide. The “menuing” of legal options is then centrally about disclosure of these legal options. This disclosure might be found on the face of statutes. For example, Yair Listokin has found that some corporate statutes, specifically anti-takeover statutes, differ on whether they advise corporations about the possibility of default alternatives.\textsuperscript{35} At other times, the menu disclosure might occur in judicial opinions. Cardozo would merely be stating a default if he said that parties are free to opt out of the substantial performance rule, but in \textit{Jacob and Youngs} he went further and announced the most minimal type of menu when he suggested that they were free to contract for a specific alternative to the substantial performance rule, an alternative where a buyer’s duty to pay was conditioned on perfect tender by the seller.

The prerequisite of menu disclosure – on the \textit{communication} of the simultaneous offers – raises the important issue of what channels constitute sufficient disclosure. To some extent, a legislative committee report or reporter’s comment that delineates non-default alternatives for which private parties can contract might constitute a kind of a menu, even if private parties must incur additional costs to uncover the menu list of alternatives. Here, the multiplicity of channels for disclosing legal menus emulates a standard practice in software programming which strives to optimize the “user

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{33} See Marty Lipton, \textit{Pills, Polls, and Professors Redux}, 69 U. CHI. L. REV. 1037 (2002)
\item \textsuperscript{34} Ian Ayres, \textit{Menus Matter}, 73 U. CHI. L. REV. 3 (2006).
\end{itemize}
\end{footnotesize}
experience” (UX). UX theory teaches that it is often appropriate to bury some more sophisticated menu options in deeper levels of the software interface – which can only be accessed by clicking through top-level windows. This method of menuing is referred to as “progressive programming” and its goal is to unclutter and simplify the presentation of choices for most users, most of the time. For example, in Microsoft Word, the top-level Print window presents a partial menu (giving users the option of opting out of the “all document pages” printing option and instead just printing the “Current page”), but the Word program forces users to click on an “Options…” icon in order to access additional menu alternatives (for example, to “Print hidden text” or to “Update linked data before printing”). Progressive programming often strives to follow an 80/20 rule (or what programmers call the “Pareto principle”) – limiting the top-level menu option to the 20% of options that are used by 80% of people.36

The provision of menu alternatives made available in top-level statutes as well as in potentially more difficult to access regulations, judicial opinions, committee reports and reporter comments might be justified by reasoning analogous to progressive programming. By providing easy access to the non-default menu items for which most people will opt, lawmakers can economize on the important transaction cost, discussed above, of becoming cheaply informed about the existence of the most prevalent default alternatives. In both cases, more sophisticated users are able to discover additional options without burdening less sophisticated users with excessive menu choice.

An alternative to progressive programming of legal menus is to make menus “non-exclusive.” Just as restaurant menus might provide a non-exclusive list of orderable items, a non-exclusive legal menu would allow contractors to choose at least one legal alternative that was not expressly specified. Non-exclusive menus allow contractors/patrons at least some opportunity to order off the menu. And like restaurant menus, legal menus might (in second-order fashion) indicate whether or not the menu options are exclusive – or, like most restaurant menus, a legal menu might be silent as to whether or not it is exclusive.

While legal menus and altering rules are closely related, they are distinct. A menu discloses at least some of the default alternatives that are available, but a menu might or might not disclose the mechanism for opting out of the default treatment. The disclosure of the mechanism for opting out is the choice to expressly disclose the altering rules for that choice. Accordingly, lawmakers in crafting a default can choose among four different types of menu/altering rule disclosures:

<table>
<thead>
<tr>
<th>Menu Specified</th>
<th>Altering Rules Specified</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Software; Georgia Fair Price provision</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Most Restaurants Menus; <em>Jacob &amp; Youngs</em></td>
</tr>
<tr>
<td>No</td>
<td>U.C.C. § 2-206 (“unless unless immature Common-Law</td>
<td></td>
</tr>
</tbody>
</table>

Through the lens of software programming, it is natural to think of menus and the disclosure of altering rules as being tied together. Software menus usually disclose not just the optional default alternative but also the mechanism for altering the default— for example, visually indicating that one needs to check or uncheck a box. Analogously, statutes at times disclose distinct default alternatives as well as the altering-rule means for achieving these alternatives. For example, the Georgia Business Corporation statute provides the menu option for corporations to be governed by a fair price provision (which is an alternative to the no-fair-price-default) and the statute explains the altering means for achieving this alternative (by specifically opting into the statutory requirements in corporate bylaws).

In contrast, more traditional restaurant menus usually do not specify the altering rules (“tell the server”)— although a few restaurants do provide a kind of altering rules by providing ordering instructions (“order at the counter” or “order by checking off items on this form”). And as depicted in Table 3, lawmakers might alternatively choose to disclose the altering mechanisms that would be necessary or sufficient without disclosing the substantive alternatives that could displace the default. The U.C.C. Section 2-206 accomplishes this—in that it provides information about what is necessary to displace the default acceptance standard, without indicating what alternatives to the default might be chosen. Or the lawmakers might choose not to give guidance about either the non-default options or the mechanisms for achieving them. This is the classic state of a common-law regime of contractual freedom— especially “immature” regimes where the accretion of precedent has not provided judicial disclosure guidance about particular mechanism that are sufficient to achieve particular alternatives.

Added to the plethora of altering rule decisions facing lawmakers, we must now add the choice of whether and through which channel lawmakers should disclose and instruct parties on particular mechanisms for achieving particular default alternatives. It is one thing for lawmakers to decide on a regime of second-order altering rules; it is quite another thing to billboard the results. In stylized and simplistic economic models that assume full-informed and hyper-rational decision makers, menuing and altering rule disclosure will have no impact. But in the real world, disclosure of altering rules can have first-order impacts.

37 In software, the disclosure of the altering rule is usually a suggestion (and not a declarative sentence along the lines of “click here if you want X”) underscoring that acts of interpretation are sometimes necessary for altering rule disclosures to be effective.
38 GA. CODE ANN. § 14-2-1111(a) (2010) (“The requirements of this part shall not apply to business combinations of a corporation unless the bylaws of the corporation specifically provide that all of such requirements are applicable to the corporation.”). See also Listokin, Corporate Default Rules, supra note 36, at 283.
39 One could imagine a prime number restaurant, where each item is assigned a unique prime number that mandates that customers order by telling the server a single number. For example, by telling the server “60”, a patron would be saying that her party wanted one order of “number 5”, one order of “number 3” and two orders of “number 2” — since 60 = 2x2x3x5.
B. Minimizing Transaction Cost

The simplest normative theory for setting altering rules might be for the law to set such rules in order to minimize the cost of contracting. One of the great values of default rules is that parties, by remaining silent, can costlessly incorporate default rights and duties into their agreement. Cost-minimizing altering rules can serve an analogous function by allowing parties to cheaply incorporate modular rights and duties by employing particular collections of words in their agreement. A cost-minimizing approach to the setting of altering rules would be particularly useful in establishing sufficient conditions for achieving certain legal outcomes. By including the provision that “employees can only be fired for just cause,” employment contracts can cheaply displace an at-will default and incorporate a stricter standard for assessing the legitimacy of a termination.\(^{41}\)

A focus on minimizing the transaction costs of displacement would lead lawmakers to focus on providing a non-prolix, non-exclusive set of sufficiency rules. Establishing that just a few words are sufficient to displace a default (such as “as is” to displace the U.C.C. default warranties, or “F.O.B. place of shipment” to displace the uncertain destination default) economizes on the drafting costs in a direct sense of reducing the writing and reading costs of contract drafting.\(^{42}\) Moreover, a sole focus on transaction costs would also tend to lead toward non-exclusive altering rules – so that courts might give effect to multiple displacement methods (including idiosyncratic or one-off provisions) indicating the parties’ intention to displace a default with a particular alternative. Giving effect to a multiplicity of methods reduces the costs of learning the law – especially the necessity to learn the altering rules themselves.\(^{43}\) A contract law that includes necessary elements for displacement will tend to increase the cost of becoming (and remaining) informed of the requisite procedures for displacement.

This transaction cost-minimizing goal has an immediate implication for judicial decisionmaking: In deciding interpretation disputes, and in fact in deciding any contractual issue concerning defaults, judges should presumptively provide in their decisions contractual language that would allow future contractors to achieve the results desired by the losing party. Judges should strive to tell losing parties how they can alter

\(^{41}\) Analogously, if a jurisdiction adopted a “just cause” default, contractors might cheaply displace it to expand an employer’s firing right with a provision stating that “employment is at will.”

\(^{42}\) U.C.C. § 2-316(3)(a) (“as is” is sufficient to displace implied warranties); U.C.C. § 2-319 (describing impact of F.O.B. (free on board) and F.A.S. (free along side) provisions). See Clark A. Remington, Llewellyn, Antiformalism and the Fear of Transcendental Nonsense, 44 WAYNE L. REV. 29, 64 (1998) (“If the parties do not specify, should their contract be treated as a shipment contract or a destination contract? The Code does not say. . . . [W]hat Professors Ayres and Gertner have called a “penalty default” would be appropriate. The consumer or unsophisticated merchant is more likely to be ignorant of these rules than is the sophisticated merchant, and is more likely on average to run afoul of a shipment contract default rule.”). But see U.C.C. § 2-205 cmt. 5 (“under this Article the ‘shipment’ contract is regarded as the normal one and the ‘destination’ contract as the variant type”).

\(^{43}\) Minimizing transaction costs should include the party cost of learning the altering rules as well as the social costs of specifying and promulgating the altering rules. See Louis Kaplow, Rules Versus Standards: An Economic Analysis, 42 DUKE L.J. 557 (1992) (discussing the higher costs of ex ante and ex post specification costs, respectively, of rule and standards).
future contracts to win next time. By providing a sufficiency rule, the judges could lower the transaction costs for future parties who would prefer a different outcome. Judicial restraint normally counsels against aggrandizing judicial power by providing advisory opinions on issues that are not yet ripe “cases or controversies.” But in the realm of contracts delineating a merely sufficient altering rule is an effective means for disclaiming judicial power, because it empowers the future parties to decide whether they want their contract to be evaluated by the losing side’s theory of the case in the last dispute. Indeed, failing to provide a sufficiency altering rule aggrandizes judicial power, because future parties are left in a quandary about what they need to do to overrule a court’s treatment. Making transparent the means through which private parties contractors can contractually “overrule” a court decision guards against the tendency of courts to restrict contractual autonomy by transforming nominal default rules into de facto mandatory rules.\footnote{See Goetz & Scott, supra note 3, at 263 (discussing tendency of courts to change defaults into mandatory rules).}

Cardozo’s opinion in \textit{Jacob & Youngs} is a prime example – in announcing the substantial-performance rule as a default, he famously teases “apt words are well known.” But Cardozo never specifies exactly what those apt words are that would be sufficient to make a buyer’s duty conditional. \textit{Jacob & Youngs} is a classic example of a court announcing a default, but failing to specify the associated altering rules. The construction contract at issue, on its face, specified that the buyer’s duty to pay was conditional on an architect’s certification. Cardozo found that the parties’ attempts to displace the substantial performance rule were insufficient, without indicating what words would be sufficient. Particularly, when a court determines that contractor’s \textit{attempts} in a particular contract were insufficient to achieve the result advocated by the losing side in a dispute, courts should drop a footnote identifying what language would be sufficient or explaining why it is not providing such language.

In developing the footnote language, the court would need to decide how broadly or narrowly to draw the language that would be sufficient to obtain an alternative result. Narrowly drawn language might only affect the outcome of future litigation that was precisely on all fours – for example, a failure to install Reading pipe, while broader language might make clear that the buyer’s duty to pay was conditional on an architect’s certification. Courts might invite the litigants to submit language for what they think should constitute sufficient language. Just as litigants routinely aid the court in crafting language to instruct the jury, the litigants might be enlisted to aid the court in crafting language to instruct future contractors.

As a formal matter, the footnote would be \textit{dicta} and not binding precedent upon future courts. This is all the more true when lower courts drop footnotes suggesting sufficient language to obtain an alternative result. Future contractors litigating a contract with the suggested language would only be able to argue that the prior opinion’s footnote represents persuasive authority. But even dicta, when expressly relied upon by future contractors, can provide powerful evidence of the parties’ intent. The language of the footnote used in a future contract is likely to be respected by higher or sibling courts not just because the footnote is binding, but because the expressed intention of the contractors is binding (absent some public policy restricting contractual freedom). Even if a subsequent court resisted giving the intended legal affect to the footnoted language,
the court is likely to be under increase pressure to provide an alternative that would be sufficient—or explain why it was unwilling to provide an altering rule.

Later on, as I complicate the normative theory for setting altering rules, I will suggest rationales that a court might plausibly offer for failing to educate future parties as to what would be sufficient to overrule or nullify the impact of a decision. But for now it is important to see how articulating sufficiency altering rules can enhance the private autonomy of future contractors. Just as expressly articulating in written appellate decisions the standard of review for mixed questions of law and fact led to a substantial development of that area of law, a presumption that contract decisions will announce sufficient altering rules can lead to a beneficial proliferation of options likely to increase contractual certainty.

When I presented a version of this proposal several years ago at a Federalist Society conference, some audience members rejected the idea because it reminded them too much of the Supreme Court’s Miranda decision. But one of the values of this Article is that it allows us to delineate two different aspects of Miranda. It delineated a default rule that confessions procured during in-custody interrogations were inadmissible, and it gestured at what would be a sufficient altering rule (that is, a sufficient admonishment) for displacing that default. Most critiques of Miranda concern the

45 See United States v. McConney, 728 F.2d 1195, 1202 (9th Cir. 1984) (“The appropriate standard of review for a district judge’s application of law to fact may be determined, in our view, by reference to the sound principles which underlie the settled rules of appellate review just discussed. If the concerns of judicial administration—efficiency, accuracy, and precedential weight—make it more appropriate for a district judge to determine whether the established facts fall within the relevant legal definition, we should subject his determination to deferential, clearly erroneous review. If, on the other hand, the concerns of judicial administration favor the appellate court, we should subject the district judge’s finding to de novo review. Thus, in each case, the pivotal question is do the concerns of judicial administration favor the district court or do they favor the appellate court.”), overruled on other grounds by Estate of Merchant v. Comm’r, 947 F.2d 1390 (9th Cir. 1991); Steven Alan Childress, A 1995 Primer on Standards of Review in Federal Civil Appeals, 161 F.R.D. 123 (1995); Martha S. Davis, A Basic Guide to Standards of Judicial Review, 33 S.D. L. REV. 469 (1988) (quoting aforementioned passage from McConney for addressing “[t]hose issues which reach the reviewing court [that] tend to be largely in the gray area of mixed law/fact questions”); Kelly Kunsch, Standards of Review (State and Federal): A Primer, 18 SEATTLE U. L. REV. 12, 27 (1994) (quoting aforementioned passage from McConney for “stating that the appropriate standard should be determined by reference to the sound principles that underlie appellate review”).


48 Id. In contrast to the UCC’s “magic words” approach with regard to the waivers of the implied warranty of merchantability, see supra at note 7, the Miranda court eschewed magic words and left the states and localities free to develop safeguards that were at least as effective as the Court’s minimum. People might imagine the Miranda warning repeated on TV (and in real life) was established in the opinion as a sufficient admonishment. The opinion did contain language that gestures toward what a minimally acceptable warning should contain. See, e.g., Miranda, 384 U.S. at 478-79 (“To summarize, we hold that when an individual is taken into custody . . . and is subjected to questioning, the privilege against self-incrimination is jeopardized . . . . He must be warned prior to any questioning that he has the right to remain silent, that anything he says can be used against him in a court of law, that he has the right to the presence of an attorney, and that if he cannot afford an attorney one will be appointed for him prior to any questioning if he so desires.) But the most common incantation of the admonishment was drafted not by a court but by the Nevada County, California, district attorney and a California deputy attorney general, who were delegated the task by California’s attorney general. Blair Anthony Robertson, Author Recalls: You Have the Right, CLEVELAND (OHIO) PLAIN DEALER, July 30, 2000, at 10A; Ronald Steiner, Rebecca Bauer &
default— that is, a concern that the Constitution does not impose a duty on police to admonish suspects of their right to remain silent. But conditional on imposing this duty (creating this default), the court disclaimed power vis-à-vis police and suspects by dropping a footnote that offered a set of admonishing words that are constitutionally sufficient to displace the exclusionary default. Critics are free to hate the default, but they should all the more love the non-exclusive altering rule.

C. The Transaction Cost/Error Tradeoff

While minimizing transaction costs is an important consideration in setting altering rules, lawmakers often need to also consider a competing goal of error minimization. Holding the transaction cost of altering constant, altering rules will tend to be less efficient if they do a poorer job of communicating the parties’ joint intent of contractual rights and duties to prospective adjudicators or if the altering rules do a poorer job of communicating to at least one of the parties inside the contract the probable consequences that will be given to particular provisions (attempts at altering). I’ll refer to the first possibility as the risk of “judicial error” and the second possibility as the risk of “party error.” While the two risks are closely related and in at least some contexts will be different sides of the same coin, I emphasize the difference because the errors are likely to engender different types of inefficiency. Party error will tend to lead the parties to undertake inefficient behavior—for the simple reason that a party who is uninformed about the terms to which (a court will find) she has consented is less likely to conform her actions to best perform her duties or best prepare to enjoy her contractual entitlements. The possibility of judicial error, in contrast, will expose parties and undermine the value of contractual entitlements in ways that can lead to inefficient negotiation and modification (which in turn can lead to inefficient ex ante contracting).

Altering rules can attend to these risks of error by making sure that the necessary and sufficient conditions for displacing a default more clearly indicate the parties’ true intention. Error-minimizing altering rules will generally require more explicit communication of the parties’ intention to create particular non-default rights/duties. But the content of the altering rules at times can be geared more toward reducing judicial error or party error. For example, the requirement that certain non-default provisions appear conspicuously in a contract49 or requirements that the opt-out language unambiguously or carefully negate the default50 are more tailored to reducing party error.


49 See U.C.C. § 2A-214 (“[T]o exclude or modify the implied warranty of merchantability or any part of it the language must mention "merchantability", be by a writing, and be conspicuous . . . .”); U.C.C. § 2-316 (same); U.C.C. § 3-311 (“[T]he claim is discharged if the person against whom the claim is asserted proves that the instrument or an accompanying written communication contained a conspicuous statement to the effect that the instrument was tendered as full satisfaction of the claim.”).

50 See U.C.C. § 2-202, cmt. 2 (“Even if the record is final, complete and exclusive, it can be supplemented by evidence of noncontradictory terms drawn from an applicable course of performance, course of dealing, or usage of trade unless those sources are carefully negated by a term in the record.”); U.C.C. § 3-402(b) (“If a representative signs the name of the representative to an instrument and the signature is an authorized signature of the represented person, the following rules apply . . . . If the form of the signature shows unambiguously that the signature is made on behalf of the represented person who is identified in
that is, the goal is to assure that the non-drafting party was aware of the particular term. A concern with judicial error would not require that terms be conspicuous because the process of subsequent litigation could naturally focus the judges’ and juries’ attention on particular provisions at issue in a particular dispute. When a conspicuousness altering rules is chosen, the concern is not that the term might not otherwise be adequately communicated to the court, it is that without conspicuousness the term would not be adequately communicated to the non-drafting party.

In contrast, the requirement that courts only enforce contracts if the terms provide a sufficient basis for granting relief51 is more geared toward reducing judicial error. The parties in an underspecified writing might understand the nature of the intended transaction, but the central problem with judicial error is that the parties’ shared intention is not adequately communicated to the subsequent adjudicator.

Just as there are information-forcing defaults, lawmakers can create information-forcing altering rules. Information-forcing defaults are motivated by an attempt to increase the information held by people inside (especially, the non-drafting party) or outside (especially, the court) of the contract.52 Altering rules can analogously be structured to induce better communication of default displacement to people inside (especially, the non-drafting party) or outside (especially, the court) of the contract. As we will see below, this information-forcing quality can be enhanced by “altering penalties” and can even be structured to induce disclosure of other types of information besides the mere fact of default displacement.53

D. Transaction Cost/Error Tradeoff in Software Confirmations

In many of incarnations, altering rules are formalities, which represent merely formal requirements for contracting around defaults. As formalities, altering rules can be structured to serve the tripartite evidentiary, channeling and cautionary purposes, initially

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51 See U.C.C. § 2-204(3) (“Even though if one or more terms are left open, a contract for sale does not fail for indefiniteness if the parties have intended to make a contract and there is a reasonably certain basis for giving an appropriate remedy.”); RESTATEMENT (SECOND) OF CONTRACTS § 33(1-2) (“Even though a manifestation of intention is intended to be understood as an offer, it cannot be accepted so as to form a contract unless the terms of the contract are reasonably certain . . . The terms of a contract are reasonably certain if they provide a basis for determining the existence of a breach and for giving an appropriate remedy.”); see also Mears v. Nationwide Mutual Insurance Co., 91 F.3d 1118, 1122 (8th Cir. 1996) (“In order to be binding, a contract must be reasonably certain as to its terms and requirements.”); Steinberg v. Chicago Medical School, 354 N.E.2d 586, 589 (Ill. App. Div. 1976) (“[I]t is basic contract law that in order for a contract to be binding the terms of the contract must be reasonably certain and definite.”); Parks v. Atlanta News Agency, 156 S.E.2d 137 (Ga. Ct. App. 1967); 1 A. CORBIN, CORBIN ON CONTRACTS 95 (1952 & Supp. 1989); 1 S. WILLISTON, A TREATISE ON THE LAW OF CONTRACTS 37 (3d ed., 1957 & Supp. 1978).

52 See Ayres & Gertner, Filling Gaps, supra note 3, at 97.

53 For example, an altering rule might require a seller/drafter to be subject to loss profit damages to disclose what those damages are expected to be. See infra Section IV.B (discussing competition-enhancing altering rules which requiring disclosure of ancillary information).
suggested by Lon Fuller with regard to the formal values of consideration. Altering rules can serve the channeling function by putting the altered provisions in terms that are easier for judges and others outside the contract to evaluate – thus reducing judicial error. Altering rules can also serve the evidentiary function of increasing the chance that the parties will understand the “existence and purport of the contract” and might thereby reduce what I have called party error.

Moreover, just as Fuller showed that consideration can serve a “cautionary” function to ensure that the parties jointly intended to create a legally binding contract, altering rules can be analogously structured to serve a cautionary function to assure that the parties in a contract prefer a particular non-default treatment of a particular issue. Altering rule formalities can slow the contracting process, and therefore reduce the likelihood of imprudent action. The cautionary function essentially is also the attempt to reduce party error. The cautionary function of altering rules is particularly easy to see in computer software with regard to the programming use of confirmation windows.

As defined by Microsoft UX Guidelines:

Confirmations have these essential characteristics: They are displayed as the direct result of an action initiated by the user. They verify that the user wants to proceed with the action.

For example, in Microsoft’s Windows operating system, when a user highlights a file in the “My Documents” folder and presses the “Delete this file” icon, a confirmation window appears asking “Are you sure you want to send <file name> to the recycling bin?” In effect, Microsoft Windows mandates that users must make two clicks to delete a file.

Confirmations of this kind show that programmers are at times willing to sacrifice the minimization of transaction costs in order verify that users really intend a particular action. The usability guidelines acknowledge that confirmation challenges and

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54 Lon Fuller, Consideration and Form, 41 Colum. L. Rev. 799 (1941).
55 Id. at 800 (quoting John Austin, Fragments – On Contracts, printed in 2 Lectures on Jurisprudence (4th ed. 1879)).
57 Relatedly, Microsoft also utilizes “warning” windows. Warning messages present a condition that might cause a problem in the future:

Their fundamental characteristic is that they involve risk of losing one or more of the following:
- A valuable asset, such as important financial or other data.
- System access or integrity.
- Privacy or control over confidential information.
- User's time (a significant amount, such as 30 seconds or more).

60 Linguists have similarly noted at times a willingness to sacrifice economy of speech to increase communicative accuracy. Every fourth letter might be deleted from this article and it would be largely intelligible. See James Gleick, The Information: A History, A Theory, A Flood (2011) (redundancy can reduce error). The Gricean maxim of cooperative conversation argues that cooperative conversant will,
warnings are a barrier to ease of use. The UX guidelines warn programmers that “[u]nnecessary confirmations are annoying.” In one of the more refreshingly candid moments, the guidelines even admit:

We overwarn in Windows programs. The typical Windows program has warning icons seemingly everywhere, warning about things that have little significance. In some programs, nearly every question is presented as a warning. Overwarning makes using a program feel like a hazardous activity, and it detracts from truly significant issues.\(^1\)

The UX theories suggest that programmers weigh and tradeoff the benefits of low-cost altering against the benefits of reducing user error:

Don't use confirmations just because there is the possibility of users making a mistake. Rather, confirmations are most effective when used to confirm actions that have significant or unintended consequences.

The disjunctive “significant or unintended” consequences nicely map onto the earlier discussion of party and judicial error. Programming confirmations are concerned with routine user actions – such as deleting a file – where the parties know the general consequences of an action but might not have intended it in a particular instance, as well as less routine actions – such as reformattting a hard drive – where the user may not understand the consequences of taking the action. The routine (file-deletion) confirmations are analogous to the goal of reducing party error – where the concern is that the parties (especially the non-drafting party) do not really have a meeting of the minds as to some non-default provision. In contrast, the unintended consequences rationale for confirmation is more analogous to a concern with reducing judicial error, where the parties know what the contract says, but are not sure of what legal effect it might be given. But the quoted guidelines also make clear that the mere “possibility of users making a mistake” is not sufficient to impose additional altering costs on users; there must be the prospect of a substantial cost of users mistakenly opting out of the default usage.

A simple algebraic model can go further to explore when it will be efficient for lawmakers or programmers to depart from transaction cost minimization by adding a confirmation process. The model can be thought of as a model of software confirmation (Are you sure you want to delete this file?) or restaurant confirmations (Are you sure you want it spicy?), and also as a model of requiring a more costly altering rule to displace a legal default. Image that the contracting parties in negotiating over a particular provision are choosing between sticking with a legal default Z or contracting around the default and opting instead for non-Z (denoted Ž). Assume there are N_Z contractors (who will be denoted as Z-types), for which Z is the more efficient term; and, assume there are N_Ž contractors (who will be denoted as Ž-types), for which Ž is the more efficient term. Assume there are N_Z contractors (who will be denoted as Z-types), for which Z is the more efficient term; and, assume there are N_Ž contractors (who will be denoted as Ž-types), for which Ž is the more efficient term. Imagine that the contracting parties in negotiating over a particular provision are choosing between sticking with a legal default Z or contracting around the default and opting instead for non-Z (denoted Ž). Assume there are N_Z contractors (who will be denoted as Z-types), for which Z is the more efficient term; and, assume there are N_Ž contractors (who will be denoted as Ž-types), for which Ž is the more efficient term.

There are two types of contractual errors that contractual parties might make: Type I error occurs when Z types mistakenly contract for Ž. (In the programming interpretation of this model, this would be analogous to users mistakenly deleting files that they want to retain.) Type II error occurs when Ž types mistakenly fail to contract for Ž. (In our programming interpretation, this would be analogous to users mistakenly retaining a file that they want to delete). Let E_I and E_II represent the costs of a player (contractor/user) making a type-I or type-II error. And in a world with low-cost altering rules, let the number of players making each of these errors be denoted respectively as N_I and N_II.

A benefit of this confirmation regime is that it may reduce the number of people making Type I errors. (The confirmation-question in the programming example may reduce the likelihood that users will mistakenly delete files). But it is also possible that the confirmation costs will also induce more Type II errors – as Ž types are deterred by the higher altering costs from contracting around the Z default. In a world with high-cost altering rules, we will denote the number of people who make type I and type II errors as N_I - Δ_I and N_II + Δ_II, where Δ_I and Δ_II represent the changes in the number of type I and type II errors induced by the higher confirmation/altering costs.  

With a little algebra, it is possible to show that higher cost altering rules will be efficient if:

\[(c' - c)(N_I + N_Ž - N_II) - c'(Δ_I + Δ_II) - Δ_IE_I + Δ_IE_II < 0.\]  

As suggested by the Microsoft UX guidelines, higher altering confirmation costs are more likely to be efficient when the costs of mistakenly contracting around the default (E_I) are higher. But the inequality makes clear that the possible efficiency of higher-cost altering rules depends on other factors as well. The first two terms of the left side of the

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62 The transaction and error cost induced by the low-cost altering rule is:  
Cost = c(N_I + N_Ž - N_II) + N_IE_I + N_IIE_II.  
And the transaction and error cost induced by the high-cost altering rule is:  
Cost' = c'(N_1 + N_Ž - N_II) + N_1E_I + N_IIE_II,  
where N_1 = N_I - Δ_I; N_Ž = N_II + Δ_II. The condition in the text is derived by finding when the combined costs of the high-cost altering rule are lower than the combined costs of the low-cost altering rule.
inequality show the two different effects of confirmations on transaction costs. The first term shows the increase in altering cost from the higher costs of altering (if the number of contractors who alter remain unchanged), while the second term shows how these higher altering costs are mitigated by reductions in the number of Z-types and Ž-types who alter the default. The final two terms of the left side of the inequality show the two different effects on error costs. The third term reflects the improvement in Type I errors while the fourth term reflects the potential exacerbation of Type II errors. The first and fourth terms cut against taking on the extra transaction costs and additional Type II errors of confirmations, while the second and third terms militate in favor of the efficiency of higher altering costs.

In this simple model, higher altering costs will tend to be efficient if (a) Type I error costs are larger than Type II error costs ($E_I > E_{II}$); (b) the altering rules disproportionately change Z-type behavior ($\Delta_I > \Delta_{II}$); or, (c) the difference between the costs of the higher cost rule and the lower cost rule is small ($c' - c$). The model suggests that efficiency-minded lawmakers should consider not just the mistaken opt-outs that will be induced by a low-cost (but less precise) altering rule. They also need to consider how many of these mistaken opts-outs will be deterred by requiring more precise opt-outs; what is the extra cost of opting out imposed; and whether these extra costs will induce inefficiency failures to opt out with their own attendant error costs.

With the help of the model, we can ask different questions about the advisability of programmer confirmation choices. The error costs of mistakenly deleting a file do seem to greatly outweigh the error costs of mistakenly retaining a file (especially in a world with reduced storage costs), and the added confirmation costs of deletion probably do not deter many users from deleting unwanted files. Then again, a file deletion in Windows is really moving the file to the recycling folder where it can still be retrieved – so the error of a mistaken deletion is not as great because it is reversible. In contrast, Windows does not ask you to confirm if you really want to save changes to a file that you are editing – even though the original file that is overwritten is irretrievably lost. Some users might prefer to be able to move a file to recycling with a single click (as is allowed with emails in Microsoft Outlook); other users might prefer to have a confirmation before irretrievably losing the previous version of a file at saving. The contested and varying size of the components to the inequality suggests that word-processing programs might give users the option to eliminate or add confirmation pages. The model is particularly helpful in focusing our attention on the number of people whose behavior is affected by a particular confirmation. A confirmation that is almost universally click through is less likely to be efficient.

F. Strategies for Implementing Error-Reducing Altering Rules

The foregoing reductionist analysis abstracts away from many of the specifics of real life contracting – particularly when it assumes that a higher cost altering rule can reduce the likelihood of party error. This section turns toward less abstract application
and suggests specific strategies lawmakers can use in crafting altering rules to lower the prevalence of error. Ideally, the error-reduction strategy will grow out of the reasons the error is occurring. In the programming context, users sometimes commit a type of contractor error because they unintentionally click on an icon. This kind of error— which should be distinguished from not knowing the generally consequences of the action— might be caused literally by a trembling hand or it might be caused by a mental lapse. Errors in drafting (for example, omitting the word “not” or mistakenly adding an extraneous zero to the price) are analogous to this type of error. But in the contracting context, where there are at least two contractors and often one takes little part in the drafting of terms, there is also the chance that the non-drafting party will mistakenly assent to terms to which the parties do not agree. As mentioned above, the risk of party error might be reduced by requiring that error-prone terms be conspicuous (potentially regulating a minimum font size and boldness or italic lettering). Alternatively, to reduce error, the law might require certain provisions to be separately initialed.

But a lesson from programming is that trying to reduce error by placing mental-speed bumps in the altering path can be rendered less effective if the contractors ignore or become habituated to the speed-bumps. The automated confirmation to opening attachments or deleting files leads some users to click delete and then reflexively hit enter to satisfy the confirmation challenge. But as the users’ responses become automated, there is so little time for a user to reconsider the initial click of deletion that the confirmation eventually serves little purpose. Similarly, non-drafting parties who routinely initial mandatory contract provisions without reading them gain little protection from the mandated procedural requirement. In both programming and contracting, repetition can be at odds with mindfulness. A borrower who has to initial in fifty different places to take out a mortgage may end up with little altering rule protection as the borrower is liable to rush through the unpleasantness as quickly as possible.

1. Thought-Requiring Altering Rules

One of the great lessons for contract law from UX theory is captured by the aphorism: “Make confirmations require thought.” Software programmers have developed mechanisms that make it harder to unthinkingly blow through a confirmation— particularly when the programmers are trying to respond to the problem of users not knowing the consequences of less routine actions.

For example, in discussing the labeling of the commit buttons (the icons that will actually execute the action on a confirmation dialog box), the Microsoft UX guidelines contrast the labels that should be used on confirmation buttons when there is a possibility of unintended consequences with those that should be used in other circumstances. These labels on the commit button are a part of the program’s altering rule. Normally, the commit buttons in dialog boxes should be labeled to give users an immediately transparent description of the basic action (such as labels that indicate “Shut Down” or “Cancel”). The guidelines justify clear labeling on cost-minimization grounds, but

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66 Id.

67 For example, in Microsoft Word, one way to bold text is to click on the commit button/icon labeled “B.”
distinguish the labels that should be used with respect to confirmations: “[Clear labeling] leads to efficient decision making because users have to read a minimum amount of text to proceed. However, this efficiency goal can be counterproductive for confirmations.”

When labeling confirmations buttons, the UX guidelines advise programmers against giving immediately transparent labeling as a way to force the user to think more about the particular consequences of an action. The guidelines characterize the following example as “incorrect” labeling:

**Incorrect:**

![Image of a confirmation dialog]

In this example, the correct response requires thought. If you present this confirmation immediately after the user gave the Uninstall command, the user's response is likely to be "Of course I want to uninstall!" The user will click Uninstall without giving it a second thought.

For confirmations, we don't want users making hasty, emotional decisions. To encourage users to think about their response, we need to provide a small decision-making speed bump.

The Guidelines suggest that for confirmations “it's usually better” to indicate in the label “that there is a reason not to continue,” as in this guideline example:

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68 Id.
69 Id.
Better:

In this example, "anyway" is added to the commit button label to indicate that the confirmation gives a reason not to continue.

Most perversely, the guidelines suggest at times the use of intentionally ambiguous Yes/No commitment buttons which "forces users to at least read the main instruction." For example, the following confirmation dialog box buries the question at the end of the prophylactic text.

These ambiguous-unless-you-read-the-instructions labels suggest a variety of mechanisms that might be used by lawmakers to increase the likelihood that contractors will be informed before they consent. For example, if lawmakers are concerned that the non-drafting party is not adequately aware of and might not assent to a particular provision, an altering rule might require more specificity before enforcing an attempt to displace a default. For example, some courts have shown a reluctance to find that a merger clause accomplishes a “total integration” unless the merger clause more specifically excludes the legal effect of any prior representation or promises.  

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*THIS AGREEMENT SIGNED BY BOTH PARTIES AND SO INITIALED BY BOTH PARTIES IN THE MARGIN OPPOSITE THIS PARAGRAPH CONSTITUTES A*
with regard to the enforcement of conditions that might work disproportionate forfeitures, the law might require specificity about the kinds of “innocent and trivial” breaches that would trigger a breach instead of merely enforcing a non-specific provision that buyer may withhold payment for any deviation from perfect tender. In some settings, altering rules that require more specificity would be tantamount to transforming the default into a quasi-mandatory rule (which will be discussed below) because it would be impossible to describe with sufficient specificity all the future states of the world. But specificity requirements in altering might also impose a different kind of mandatoriness by substantively requiring that the parties’ duties and rights have more of a substantive fit. For example, an altering rule for expectation damages might require that to be enforceable a liquidated damages provision must make the amount of the liquidated damage commensurate with the actual or expected damage. Liquidated damages of $300 dollars for a buyer’s breach of a one-week or a two-year cellphone contract would fail this “make the punishment fit the crime” altering requirement.

Requiring more specific language can only succeed in spurring more thought by non-drafters, if they read the greater detail. Providing greater detail lengthens the contract and thereby can reduce the probability that a non-drafter will read it. Altering law can imperfectly respond to this problem by requiring that particular types of provisions be separately initialed. Required initials are unlikely to succeed in causing many contractors to pause and consider the intended proceeding. Analogous to the software context, where users become habituated to quickly click twice to delete, many non-drafters may quickly initial at the indicated X’s without pausing to think whether the associated provision is objectionable. At best, required initials may inform a subset (and probably a small minority) of non-drafters and is thereby unlikely to substantially impact the contractual equilibrium.

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**FINAL WRITTEN EXPRESSION OF ALL THE TERMS OF THIS AGREEMENT**

AND IS A COMPLETE AND EXCLUSIVE STATEMENT OF THOSE TERMS. ANY AND ALL REPRESENTATIONS, PROMISES, WARRANTIES OR STATEMENTS BY SELLER’S AGENT THAT DIFFER IN ANY WAY FROM THE TERMS OF THIS WRITTEN AGREEMENT SHALL BE GIVEN NO FORCE OR EFFECT.

*Id.* See Seibel v. Layne & Bowler, Inc. 641 P.2d 668, 671 n.1 (Or. App. 1982) (approving this language and warning “unless the buyer is informed that the seller is disavowing those representations, the seller cannot expect protection from his agent’s errors”).

71 *See infra* Part III.


73 See, e.g., TENN CODE ANN. § 29-5-302 (2011) (“[A] provision in a written contract to submit to arbitration any controversy thereafter arising between the parties is valid . . . provided, that for contracts relating to farm property, structures or goods, or to property and structures utilized as a residence of a party, the clause providing for arbitration shall be additionally signed or initialed by the parties.”); Wis. ADMIN. CODE A.T.C.P. § 134.09(4)(b) (2011) (“A lien agreement under par. (a), if any, shall be executed in writing at the time of the initial rental agreement. . . The lien agreement is not effective unless signed or initialed by the tenant.”).

74 See *generally* 15 U.S.C. § 1638(B) (2006) (requiring disclosure statement of “consumer's right to obtain . . . a written itemization of the amount financed” that “shall include spaces for a ‘yes’ and ‘no’ indication to be initialed by the consumer”); STATE OF CALIFORNIA: DEPARTMENT OF REAL ESTATE, MORTGAGE LOAN BROKER COMPLIANCE EVALUATION MANUAL 6, *available at* [http://www.dre.ca.gov/pdf_docs/re_7.pdf](http://www.dre.ca.gov/pdf_docs/re_7.pdf) (prohibiting changes to escrow instructions without borrower initialing or signing); *Deed of Trust*:
A more direct mechanism to implement a thought-requiring altering rule is to require that the non-drafting party write out the provision by hand. The very process of writing forces the contractor to slow down and necessitates some level of cognition about the provision in question. Such a hand-writing requirement would increase the transaction cost of altering, but would increase the chance that the non-drafting party was aware of the provision’s contents. Versions of this altering rule have been used at times in admiralty law, for example, by a French ordinance which “provided that clauses in marine policies which attempted to contract out of the Ordinance de la Marine, or the general common law, were valid only if written by hand and not in print.”75

2. Train-and-Test Altering Rules

However, it is possible for altering rules to go further and require to non-drafting (and possibly even drafting) parties to pass a test before giving effect to a particular provision. If the lawmaker’s concern is to make sure that the contractors understand the consequences of opting for a particular provision, then requiring parties to pass a test would be narrowly tailored to achieve that end. Lawmakers require citizenship tests and driving tests before conferring various legal rights. Health Insurance Portability and Accountability Act (HIPAA) regulations require researchers to train and test on the requisite privacy protections before they can access personal health information.76 The online HIPAA training mandates that I view (literally that my computer project) dozens of screens of tutorial courses and that I then correctly answer fourteen of fifteen multiple choice questions. Similar “train and test” procedures might be required as altering rules before a mortgagor is allowed to opt for a prepayment penalty (e.g., “What proportion of borrowers has paid the pre-payment penalty?  A. 5-10%; B. 10-25%, etc.”) or before a customer is allowed to opt out of privacy protections (e.g., “Will other corporations have the opportunity to purchase your mailing address and shopping information?”).77 Software programmers, themselves, might take advantage of train-and-test altering rules, where the specter an ill-considered and consequential opt-out looms particularly large. (“Reformatting this computer’s hard drive will have which of the following effects . . .”).

A train-and-test altering curriculum might even contain information about negative externalities produced by dispreferred contractual provisions. In simple economic models with narrowly self-interested actors, informing contractors of negative social side effects from their actions would not change contracting behavior. But in more behaviorally realistic models, economic actors can care about others and what others

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76 45 C.F.R. § 164.530(b).
77 One could even imagine lawmakers adopting more far reaching “train and test” requirements before waiving other important rights – such as the right to trial. Instead of an admonishment that consists of a series of questions to which the defendant merely needs to answer “yes” (Judge: You understand that by waiving jury trial, you forfeit the right to X. Defendant: Yes, your honor.), the law might require the defendant to pass at least a multiple choice test that more searchingly explores whether the defendant actually comprehends (by being able to reflect back) the implications of her waiver.
think of them. Merely educating contractors about negative externalities from certain types of provisions might reduce their prevalence.

While the train-and-test strategy seems too cumbersome to be anything more than an academic thought experiment, recent mortgage legislation imposes at least an informal variation of the approach. The National Housing Act requires that homeowners receive counseling from a HUD-certified counselor before they are able to execute a reverse mortgage, also known as a Home Equity Conversion Mortgage.78 The counseling session (which can be accomplished over the telephone) must provide the homeowner with information “about the implications of and alternatives to a reverse mortgage.” The counselor must sign for each homeowner a certificate of HECM Counseling certifying that the homeowner received counseling on a list of seven specific issues. The counseling requirement can be thought of as an informal kind of “train and test” requirement. An explicit duty of counselors is to impart various types of information to the homeowners. But there is no provision for explicit testing of homeowners and not even a mechanism for counselors to refuse to certify homeowners who cannot display some minimum understanding of the reverse mortgage transaction and its consequences. The absence of more explicit testing increases the chance of party error, but reduces the transaction cost – especially for the least educated consumers. Denying contractability to those who are unable ultimately to pass the test raises the same exclusionary concerns as the requirement that citizens pass literacy tests before they were qualified to vote. The more that contracting involves a basic right, the harder it will be to restrict eligibility to those who can pass a test.

A more explicit “train and test” system concerns the student loan entrance test. Prior to the disbursement of many types of federal student loans, the 2008 Higher Education Opportunity Act mandates that first-time borrowers undergo “entrance counseling”79 to “ensure that the borrower receives comprehensive information on the terms and conditions of the loan and of the responsibilities the borrower has with respect to such loan.”80 The statute lists eleven topics that the entrance counseling must address, such as “the definition of half-time enrollment,” “[t]he obligation of the borrower to

79 20 U.S.C.A. § 1092(f)(1)(A) (West 2011). The statutory requirement to provide entrance counseling applies to loans “made, insured, or guaranteed” under the Federal Family Education Loan (FFEL) Program or the William D. Ford Federal Direct Loan Program except for FFEL consolidation loans, student-borrowed FFEL PLUS loans, direct consolidation loans, and Direct PLUS loans “made on behalf of a student.” Id. But see 34 C.F.R. § 685.304 (2011) (requiring that entrance counseling be provided to “each graduate or professional student Direct PLUS Loan borrower prior to making the first disbursement of the loan unless the student borrower has received a prior Direct PLUS Loan or Federal PLUS Loan.”).
80 20 U.S.C.A. § 1092(f)(1)(A). The subsection mandates that the information “shall be provided in a simple and understandable manner” through one of three alternative mechanisms: an in-person counseling session, a written form, or “online, with the borrower acknowledging receipt of the information.” Id.
repay the full amount of the loan,” and “[t]he likely consequences of default on the loan.”

The education act goes further than the housing act in urging institutions to explicitly test loan recipients:

The Secretary shall encourage institutions to carry out the requirements of subparagraph (A) through the use of interactive programs that test the borrower's understanding of the terms and conditions of the borrower's loans . . . , using simple and understandable language and clear formatting.

Because of this provision, students at many schools cannot finalize their student loan and receive their funds until they have passed a test demonstrating a basic understanding of the agreement. However, the standard online test offered by the U.S. Department of Education is extraordinarily easy, containing simple true/false and multiple-choice questions that largely restate the informative text presented to the borrower.

3. Arbitrary Altering Rules

Courts concerned with error minimization will have to make important choices concerning (i) whether the contract was written in what Alan Schwartz and Robert Scott refer to as “majority talk” as opposed to more a specialized language (which they refer to as “party talk”); and (ii) what evidence is admissible to show what the parties meant in the permissible language. While a full analysis of these core interpretive questions and their relationship to altering rules is beyond the scope of this Article, a concern with error minimization should push lawmakers toward developing what I will call “password” altering rules. One of the reasons that specialized language can increase the risk of error is because different language communities use the same words to denote different things. In a well-known example, the word “wife” in the phrase, “I leave my money to my wife,” might in one community mean the person to whom one is legally married while in another community the term might mean the person with whom one is cohabitating. To avoid the ambiguity, lawmakers might develop altering rules to achieve particular contractual results that only parties knowledgeable of the altering rule are likely to use. Including unusual (“arbitrary”) language in an altering rule will assure that uninformed

83 See, e.g., QUIZLET: ENTRANCE COUNSELING (FED STUDENT LOANS), http://quizlet.com/3930329/print/ (last visited Sep. 15, 2011) (listing questions and answers for the online entrance counseling test offered by the U.S. Department of Education). Students can pass merely by answering “all of the above” or “true” to all of the questions.
85 In re Soper's Estate, 264 N.W. 427 (Minn. 1935). See also Schwartz & Scott, supra note 84.
contractors will not unwittingly stumble upon the language. Altering rules with arbitrary language operates as a password which allows knowledgeable parties to achieve a desired result without running the risk that unknowledgeable parties will mistakenly invoke the sufficient condition. Arbitrary altering rules are a legal analogy to programming “Easter eggs,” hidden goodies which can only be unlocked if the user enters an arbitrary concatenation of commands that uninformed users would be extremely unlikely to stumble upon them by chance. For example, a user of Microsoft’s Excel 97, who opened a new worksheet, pressed F5, typed "X97:L97" and then pressed enter, held ctrl-shift, and clicked “Chart Wizard” would engage a fully functioning flight simulator that was hidden inside the spreadsheet program. Arbitrary altering rules can similarly be crafted to avoid invocation by the uninformed.

Arbitrary altering rules will at times be the exclusive means of achieving a particular contractual outcome, if lawmakers want to increase the likelihood that all contractors who are opting for a particular non-default provision are acquainted with the law on an issue. Indeed, as a thought experiment, one could imagine lawmakers burying an arbitrary altering rule in an online tutorial that non-drafting parties have to handwrite into a contract to opt out of the default. Here, invoking the arbitrary requisite would operate as a kind of evolving password that must be entered to gain entrance to the restricted legal treatment.

But more often lawmakers should look to deploy arbitrary altering rules that are non-exclusive means, and are merely sufficient safe-harbors for achieving particular contractual outcomes. Providing an arbitrary altering rule as a sufficient, but non-exclusive means of achieving a non-default outcome is particularly well-suited to reduce judicial error. It avoids the “wife” problem that common words may mean different things to different people. This case for merely sufficient, arbitrary altering rules is consistent with certain types of contractual boilerplate, which as terms of art have come to have well established legal meaning. However, arbitrary altering rules can at times exacerbate party error – for non-drafters who fail to understand the implied legal meanings that almost by definition are not transparently revealed by the altering words themselves.

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86 I use the term “arbitrary” as it is used in trademark law. See Zatarain’s, Inc. v. Oak Grove Smokehouse, Inc. 698 F.2d 786 (5th Cir. 1983) (“Arbitrary or fanciful terms bear no relationship to the products or services to which they are applied.”) An arbitrary trademark is usually a common word which is used in a meaningless context – such as a Salty telephone or an Apple Computer. Trademark Distinctiveness, WIKIPEDIA, http://en.wikipedia.org/wiki/Trademark_distinctiveness (last visited April 22, 2011).

87 See Stan Miastkowski, Step-By-Step: Find Software Easter Eggs, PCWORLD (Feb. 27, 2003, 1:00 AM), http://www.pcworld.com/article/109378/stepbystep_find_software_easter_eggs.html; see also HIDDEN DVD EASTER EGGS, http://www.hiddenvdieastereggs.com (last visited July 1, 2011) (“In 1885 the ruling family of Russia, the Romanovs, began a tradition of commissioning Carl Fabergé to create increasingly elaborate jeweled eggs which were exchanged by the family at Easter. Most of the known 50 eggs created contain hidden surprises such as miniature portraits, miniature coaches, and even clock-work birds that sing. It is for these beautiful works-of-art that software and DVD Easter Eggs are named.”).

Still, there is a particular type of arbitrary altering rule – related to the earlier discussed idea of judicial decisions providing contractual language that would be sufficient to achieve the legal treatment sought by the losing party in any contractual dispute not involving mandatory rules\textsuperscript{89} – that does well in reducing transaction costs, judicial-error cost and party error costs. Judges in providing sufficiency rules can make the altering words arbitrary by adding an explicit citation to the decision itself. Cardozo might have dropped a footnote with an arbitrary safe harbor immediately after making the textual claim, “This is not to say that the parties are not free by apt and certain words to effectuate a purpose that performance of every term shall be a condition of recovery.”\textsuperscript{90} The footnote might have provided an example of “apt and certain” words. For example, the footnote might have instructed future parties, “It will be sufficient for future contracts to achieve this result by including the provision ‘As suggested in Jacob & Youngs v. Kent, 129 N.E. 889, the buyer’s duty to pay is conditioned on seller’s perfect performance of every term.’” Because these altering terms are sufficient but not necessary, they merely give future contractors an additional contractual option and are unlikely to increase the costs of altering.\textsuperscript{91} Because the terms are arbitrary, the drafter is unlikely to use the term unless she is familiar with the referenced decision. And even though the non-drafting party may not be initially aware of the decision, the words of the altering rule itself provide a citation pointer that non-drafters can use to learn more about the likely legal effect of the rule. The next Part of this Article will argue that judicial concerns with externalities or paternalism might lead a court to withhold this kind of altering rule advice. These concerns might have even been present in Jacob & Youngs. But in the absence of these concerns, courts should routinely provide arbitrary altering rules (with self-referencing citations) to allow future contractors a sufficient means for achieving alternative contractual outcomes.

4. Reversibility

A final lesson that can be gleaned from the UX guidelines concerns reversibility. The guidelines suggest that instead of imposing the cost of confirmations on users to reduce the likelihood of error costs, programmers should instead provide “undo,” the ability of users to reverse a mistaken action. “For example, deleting a file in Microsoft Windows usually doesn't require a confirmation because deleted files can be recovered from the Recycle Bin. Note that if an action is very easy to perform, just having users redo the action may be sufficient.”\textsuperscript{92} One can also see from this example that the guideline authors do not have absolute control over Windows operability as one continues to find confirmation dialog boxes as a precondition to deleting files.

The reversibility is a tool of remediation. Instead of reducing the likelihood of error, the reversibility tool reduces cost of error. In contract law, the reversibility strategy is analogous to cooling off strategies, which give contractors a period of time in which

\textsuperscript{89} See supra Section II.A.

\textsuperscript{90} Jacob & Youngs v. Kent, 129 N.E. 889, 891 (N.Y. 1921).

\textsuperscript{91} Although as applied, sufficient altering rules would run the risk of becoming more costly if these rules tended to evolve toward necessary conditions for default displacement. See Goetz & Scott, supra note 3, at 263 (discussing tendency of courts to change defaults into mandatory rules).

they can undo mistaken contract formation. The Federal Trade Commission (FTC) gives buyers a three day cooling-off period to rescind any contract made at a “buyer's home, workplace or dormitory or at facilities rented by the seller on a temporary or short-term basis, such as hotel or motel rooms, convention centers, fairgrounds and restaurants.” 93 And while the FTC cooling-off rule is concerned with undue influence of pressurized sales, other cooling-off rules are triggered simply by the substantial untoward consequences that result from party mistakes in particular consequences – as exemplified by the state cooling-off provision for certain health insurance or reverse mortgage contracts.94

Cooling-off strategies – which usually give the non-drafting buyer the option of cancelling a contract during the limited cooling-off period – are not well suited for responding to the problem of judicial error, because the buyer is usually not well placed in terms of information or motivation to clarify the meaning of terms that might induce judicial error about the shared meaning of the contract. But cooling-off strategies might be better suited to respond to problems of party error. If (and as a behavioral matter it is a big if) the buyer takes the time to read the contract after signing it and learns of unfavorable terms or if the buyer takes the time to solicit competitive offers from other sellers, a cooling-off period can correct party error. But as an empirical matter cooling-off options are rarely invoked.95

III. Altering Penalties

95 See Caroline O. Shoenberger, Consumer Myths v. Legal Realities: How Can Businesses Cope?, 16 LOY. CONSUMER L. REV. 189, 216 (2004) (“The real story behind the cooling-off period, when it does exist in the law, is that it is generally ineffective against fraud. Take, for example, a door-to-door salesman for a roofing company, after signing a contract containing the legal cancellation notice, obtains a $300 down payment. Even if the resident exercises the right to the three-day cooling-off period, it's a challenge for the consumer to get back the deposit. When civil cases are filed, assuming appropriate service has been completed, the cost of collecting a judgment can exceed the amount of obtaining the actual judgment, not to mention the cost of the time spent pursuing the collection effort. Government intervention aided by news exposure may provide victims with assistance after the fact. However, criminal prosecutions are rare. Civil actions by the government also require substantial collection efforts. Attempts to educate consumers on their right to a cooling-off period to avoid becoming victims of fraud have also been ineffective. Government agencies and advocacy groups have tried to educate consumers on their rights for years. Some consumer protection agencies have tried to simplify the message: avoid doing business with door-to-door salesmen and their modern day clones—the telemarketers and spammers. Unfortunately, when it comes to reaching out to consumers, the marketers are the pros, and the buyers are the amateurs. The tactic continues to produce a lot of revenue, much of it fraudulently obtained. Statutory attempts to limit direct access to the public frequently run afoul of the First Amendment and do not withstand judicial scrutiny.”).
When lawmakers pursue an error-reduction strategy by adopting one of the foregoing strategies as the preferred means of altering, it will often be useful to simultaneously adopt complementary altering rules which penalize attempts by drafting parties to contractually achieve the same substantive provision with informationally-defective provisions. This Part will explore the theory of these complementary “altering penalties” and show how they can aid in a program of error reduction.

Just as there are three core contractual questions, there are three parallel types of contractual penalties. The law might penalize people for trying to contract around an immutable rule (immutable penalties), the law might penalize people for not trying to contract around a default rule (default penalties), and the law might penalize people for the way they attempt to contract around a default (altering penalties). All three can be seen as forms of deterrence. Immutable penalties attempt to deter contractors from attempting to contract around mandatory rules, default penalties (or penalty defaults) attempt to deter contractors from remaining contractually silent, and altering penalties attempt to deter contractors from contracting around a default in particular ways. Figure 1 is an attempt at sketching the three core questions and the possibility of three distinct kinds of penalties:

Figure 1: Three Distinct Penalty Possibilities

Imagine a line with each point representing a potential contractual treatment (combination of rights and duties) covering a particular issue. The altering process can be crudely depicted as movement from a default starting point to a contracted-for alternative using a particular altering method. The default (depicted as the contractual starting point) can be a penalty if the legal effect of silence is dispreferred by the contractors, the contracted-for provision (depicted as the contractual ending point) can be a penalty if the law reacts by private attempts to achieve impermissible ends by imposing duties/rights that are dispreferred by the contractors, and finally, the means of altering (depicted as the arrow between the starting and ending points) can be a penalty if the legal reaction to the particular method of contracting is dispreferred by the contractors. The central argument of this section is that lawmakers at times will want to use altering penalties to deter informationally-defective methods of altering even when the law is not trying to induce contracting (with a penalty default) or prevent contracting (with an immutable penalty).  

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96 Altering penalties might also be deployed to complement the impeding altering rules that will be discussed below, see discussion infra Part IV. But in such circumstances, it will be sufficient for the law to react to defective altering attempts by keeping the contractors at the socially preferred default. The key difference between these Parts is that in this Part, the substance of the alternative provision in question is not socially dispreferred so long as it is generated with sufficient information to the parties and the courts.
The potential usefulness of penalty defaults and immutable penalties is already well recognized in the literature. If contractors willfully violate some substantive immutable limit, courts at times will penalize one or both of the parties. Instead of taking the parties back to closest provision for which they might have legally contracted, some courts will impose an immutable penalty – a penalty for violating an immutable rule – by giving the drafter strictly less than she might have contracted for. Immutable penalties seek to deter such shenanigans. An employer who contracts for an unreasonably long covenant not to compete might end up with no covenant at all.\footnote{97} A seller that contracts for an unconscionably high markup might earn no profit at all.

Several scholars (including Gertner and myself) have suggested that the law at times deploy a second type of penalty: the penalty default, which seeks to deter contractors from remaining silent.\footnote{98} Penalty defaults can have an information-forcing effect, because the process of contracting around a default can provide the parties (especially the non-drafter) or third-parties (especially the court) with additional information. The information-forcing impetus of these defaults is to avoid the penalty of inaction. Through the lens of this Article, we can see now how penalty defaults should naturally be combined with error-reducing altering rules to assure that attempts to displace the default actually communicate the relevant information.

So if we can have immutable penalties and default penalties, might there not also be a role for altering penalties? The idea here is that there can be a particular social value or harm to particular forms of contracting around distinct from the substantive provision sought. Some forms of contracting around will be more effective than other forms at communicating information to the other side of a contract or to third parties. Cass Sunstein has discussed the potential utility of “information-eliciting” rules – which “impose[] on one or another of the parties the obligation to provide the crucial information to the other side.”\footnote{99} But Sunstein was considering a specialized use of penalty defaults and altering rules to elicit information. Sunstein was suggesting that one or both contractors might be stuck with a penalty default unless they comply with an altering rule which requires the effective disclosure of information in order to contract around the penalty. Information-forcing defaults will often be combined with necessary altering rules that require effective disclosure. Indeed, Sunstein’s information-eliciting rules are closely related to what Gertner and I have referred to as “affirmative choice” defaults, which require contractors to make an affirmative choice or be governed by a penalty. The default of no incorporation is governed by an affirmative choice rule – in that incorporators have to explicitly identify the names and addresses of directors if they want to establish corporate status. In Sunstein’s terminology this is another kind of information-eliciting rule. There is a sense in which any necessary altering rule is an altering penalty. If you need to use the words “for cause” to opt out of an at-will employment default, then the contractors who fail to use the magic words are penalized by not receiving their preferred legal treatment.

\footnote{97} The “might” qualifier is important. There is also a strong tendency of courts at times to merely push the transgressor of an immutable restriction back to the closest legally allowable contract. Ayres & Gertner, Strategic Contractual Inefficiency, supra note 3, at 743.

\footnote{98} Ayres & Gertner, Filling Gaps, supra note 3, at 95.

But it is also possible to have penalties not for failing to contract around a default, but for not contracting around in a legally approved way. Instead of merely being returned to the default treatment for defective attempts, the law might impose a penalizing, worse-than-default treatment for those who attempt an unapproved means of contracting around a non-penalty default. The penalty here is imposed not because the contemplated contractual ends were legally impermissible but merely because the means used were legally dispreferred.

Contractual “safe harbors” often exemplify the strategy of protecting drafters (or contractors) who use preferred altering methods while simultaneously punishing those drafters (or contractors) who use information-defective altering methods. For example, the statutory safe harbor for forward-looking statements in the Private Securities Litigation Reform Act of 1995\textsuperscript{100} is only available for issuers that include the right “magic words” with their periodical or other report.\textsuperscript{101} The immunity for using the right altering words is the carrot, and the specter of liability is the stick to drive out dispreferred altering means.

A. Ex Post Penalties vs. Ex Ante (Lanham-Inspired) Safe Harbors

Consider for example a state statute that establishes the default rate of interest on consumer loans to be the “average prime offer rate” at the time of lending plus two percentage points.\textsuperscript{102} The statute expressly allows parties to contract for any higher rate of interest so long as the interest is “clearly expressed in writing.”\textsuperscript{103} At this point, the reader should realize that the quoted language partially specifies the altering rules governing attempts at contracting around. But the hypothetical statute goes further and specifies that if the contract attempts to contract for a higher interest rate but without clearly-expressed writing, the interest rate will be reduced to zero percent. In this example, the statutory default is not a penalty because it is not intended to induce contracting by penalizing one side or both sides of the contract. And the statute is not penalizing attempts to contract for substantively usurious interest rates. In fact, in this hypothetical, the state allows the parties to agree to virtually any contract – possibly only restricted by unconscionability challenges. The sole purpose of the zero percent penalty is to deter lenders from inadequately disclosing the altered interest term. While this statute is a hypothetical, Wisconsin in fact has a consumer lending statute that sets a five percent interest rate default, but allows lenders to charge substantially higher rates so long as the higher rate is “clearly expressed in writing.”\textsuperscript{104} The Wisconsin statute is best

\textsuperscript{101} See, e.g., Slayton v. Am. Express Co., 604 F.3d 758, 773 (2d Cir. 2010) (finding that American Express Co.’s Form 10-Q had failed to include the requisite words in order to come under the safe harbor).
\textsuperscript{103} WIS. STAT. § 138.04 (2011).
\textsuperscript{104} Id.; Diversified Mgmt. Servs., Inc. v. Slotten, 351 N.W.2d 176, 181 (Wis. Ct. App. 1984). See also Ayres, supra note 4 (discussing Wisconsin statute as example of penalty default).
characterized as a penalty default combined with a necessary altering rule – inadequate altering results in the lender earning the penalizing five percent interest.\textsuperscript{105} In contrast, the “average prime” hypothetical combines a non-penalty default with a penalty-altering rule if altering attempts are not sufficiently clear.

A similar result can be found in a “sticky opt-out mortgage system” proposal of Michael S. Barr, Sendhil Mullainathan, and Eldar Shafir.\textsuperscript{106} Their proposal would establish as default certain plain-vanilla lending terms which would exclude prepayment penalties and short-term ARMs with balloon payments.\textsuperscript{107} But they couple this default with penalizing altering rules, i.e., rules that penalize deviating loan terms that do not adequately inform consumers of the alternative language. Their key innovation is to subject lenders to the risk of additional legal exposure if they contract away from the more plain-vanilla default:

[U]nder one potential approach to making the opt-out sticky, if default occurs when a borrower opts out, the borrower could raise the lack of reasonable disclosure as a defense to bankruptcy or foreclosure. Using an objective reasonableness standard akin to that used for warranty analysis under the Uniform Commercial Code, if the court determined that the disclosure would not effectively communicate the key terms and risks of the mortgage to the typical borrower, the court could modify or rescind the loan contract.\textsuperscript{108}

The authors describe this regime as a sticky default, because an important purpose of their proposal is to use the specter of uncertain ex post damages as a goad to encourage (most) lenders to stick to the legally preferred defaults. The tone of their analysis suggests that they would not want to provide any safe-harbor language which could provide deviating lenders with ex ante immunity. The stickiness of the default (that is, the use of impeding altering rules) might be justified by pointing to sufficient negative externalities or paternalism. Both such concerns are certainly at play with regard to home mortgages.\textsuperscript{109}

But an alternative version of their proposal might instead rely on soft paternalism to justify making sure borrowers are meaningfully informed about the non-default terms of their home mortgage, often one of their most consequential lifetime contracts. Indeed, one of the authors’ explicit goals is giving lenders “stronger incentives to provide

\textsuperscript{105} A similar characterization can be given to contra proferentem rule which construes ambiguity against the drafting party. RESTATEMENT (SECOND) OF CONTRACTS §206 (“Interpretation Against the Draftsman”); Mastrobuono v. Shearson Lehman Hutton, Inc. 514 U.S. 52 (1995) (broker who drafted an ambiguous document on choice of law “cannot now claim the benefit of the doubt”); Wilner’s Inc. v. Fine, 266 S.E.2d 278, 280 (Ga. App. 1980) (“It is also a well established rule that ambiguities in writing are to be construed most sternly against the author or the party for whose benefit the writing was prepared, which, in this case, is the landlord.”). Through the lens of altering theory, we can now see that this rule of interpretation combines both a penalty default and a clear-statement altering rule.


\textsuperscript{107} Id. at 41.

\textsuperscript{108} Id. at 43.

\textsuperscript{109} See supra Subsection II.F.2.
meaningful disclosures to those whom they convince to opt out.\textsuperscript{110} A proposal that is legislatively agnostic about the use of non-default terms – so long as those terms are well-understood by borrowers – would not need to resort to impeding altering rules, but could instead use penalizing altering rules if there was not meaningful disclosure. The difference here is whether the altering rule is trying to impede even fully-informed parties from contracting away from the default or merely use the threat of the penalty to insure that the parties are fully-informed. Just as penalty defaults have been also been labeled as “information forcing” defaults, the penalty altering rules might equivalently be referred to as “information-forcing” altering rules.

A soft paternalism approach to “information-forcing” might be structured to provide more of an ex ante safe harbor without undermining the goal of providing meaningful information. Taking a page from Lanham Act deceptive advertising disputes,\textsuperscript{111} the law might ask lenders who use non-default terms to undertake consumer studies to establish that typical borrowers in real-world contexts understand the non-default terms of the mortgage. While my earlier “train and test” altering rule imposes the transaction cost of testing 100 percent of non-drafters, the Lanham-inspired altering rule would only require testing a subsample to assure that the disclosure was meaningful for the typical consumer given the totality of the circumstances. Lanham-inspired altering rule requirements accordingly could economize on transaction costs and could potentially provide lenders with more of an ex ante safe harbor without sacrificing the legal goal of actually educating non-drafters through the altering rule.

A similar approach might be used to enhance the informed-consent of Internet users regarding privacy waivers. Deviations from default privacy protection on websites like Facebook would only be immune from potential ex post liability if the website established in advance with consumer testing that the typical consumer in the study could accurately describe the privacy protection of their account.\textsuperscript{112} (Many readers of this Article would not be able to accurately describe the privacy protection of their Facebook accounts.)

B. Competition-Enhancing Altering Rules

Regulating opt-out with regard to non-price terms can indirectly enhance price competition. Impeding altering rules, which in equilibrium induce more standardization among the non-price terms, can promote market competition over price by facilitating comparison shopping. For example, Michael Barr and his coauthors explain the precompetitive effect from creating sticky mortgage terms:

\textsuperscript{110} Barr, et al., supra note 106, at 43.
\textsuperscript{112} Because consumer surveys of this kind have substantial fixed-cost components, lawmakers might choose to limit the advance-testing requirement to sites with more than a certain number of registered users.
By barring prepayment penalties, we could reduce lock-in to bad mortgages; by barring short-term ARMs and balloon payments, we could reduce refinance pressure; in both cases, more of the cost of the loan would be pushed into interest rates and competition could focus on a consistently stated price in the form of the APR.\footnote{Barr et al., supra note 106, at 42.}

Standardizing non-price terms can thus lead to more competitive price terms, because it can become easier for consumers to make apples-to-apples comparisons and easily assess the lowest price offer.

But it is possible to use penalty-altering rules to induce meaningful disclosure of information related to the competitiveness of the offered price. Normally, penalty-altering rules will be framed to better inform contractors about the terms of the contract. Soft paternalism might thus justify penalizing drafters who inadequately inform non-drafters that they are agreeing to pre-payment penalties or waiving their privacy rights. But altering penalties at times can also be crafted to provide contractors (usually buyers) with better information about whether the contract is a competitive price. The goal of such regulation will not be to give contractors better information about the price term, but rather information about whether the price term is supra-competitive – that is, whether the same goods or service might be had from another seller at a lower price. As a conceptual matter, altering penalties could be used to induce the production of information wholly unrelated to the contract. One could imagine lenders only being able to include a pre-payment penalty if they educated borrowers about the benefits of voter registration or organ donation. But competition-enhancing altering rules have an obvious connection to the contract itself.

Normally, the law puts very few conditions on contractor’s freedom to displace the reasonable price default.\footnote{See U.C.C. § 2-305(1) (2011) (“The parties if they so intend can conclude a contract for sale even though the price is not settled. In such a case the price is a reasonable price at the time for delivery . . . .”); see also Ayres & Gertner, Filling Gaps, supra note 3, at 92 (discussing the fact that price and quantity defaults are starkly different).} In most markets, the unconscionability law at most sets a theoretical cap on the amount that a seller can charge. But instead of (or in addition to) creating a price ceiling, lawmakers could, consistent with contractual freedom, require that sellers offering a sufficiently high price include information that would allow buyers to better assess whether the price was competitive. The Home Ownership and Equity Protection Act (HOEPA) already implements a version of this enhanced disclosure. High interest rates or high fees trigger a lender requirement of enhanced disclosure and a three-day cooling-off period.\footnote{The enhanced disclosure is currently triggered for “high cost” loans if the loan’s annual percentage rate (APR) exceeds the rate on Treasury securities with a comparable maturity by eight percentage points or if certain fees on the loan exceed $400, a figure which is adjusted annually ($592 for 2011). See 12 C.F.R. § 226.32(c); Maman, supra note 108, at 215-16.}

Two categories of information are particularly likely to spur price competition: information on markups and information about the price of comparable sales. The first category concerns disclosure of information about a seller’s markup (or related information concerning seller’s cost or seller’s expected profit on the contract). In markets where consumers may be imperfectly informed about the competitive price,
markup information can partially substitute for information about the broader market price.\textsuperscript{116} If you are about to agree to pay $23,000 to a dealership to buy a car and suddenly learn that the dealership will earn a $9,000 profit, you are more likely to continue to bargain or search at other dealerships than you are if you learn that the dealer will only earn a $900 profit.\textsuperscript{117} The truth in lending requirement that brokered mortgage contracts disclose the “yield spread premium” on a loan is just this kind of price-enhancing altering rule.\textsuperscript{118} Borrowers who learn that their broker is about to earn $14,000 for three hours of work might be more likely to search for better terms than borrowers who learn that their broker is earning $1,200.\textsuperscript{119}

The second category of competition-enhancing information concerns the price at which comparable goods or services are currently selling in the market. The potential value of comparable price information to imperfectly informed consumers is manifest in their common place use in real estate negotiations or more recently by real estate websites like Zillow.com, which estimate the value of a residence by comparing it to the recent sale prices of nearby homes.\textsuperscript{120} An altering rule could enhance market competitions in select settings by penalizing sellers who fail to provide comparable information. The Home Ownership and Equity Protection Act already includes a trigger for enhanced disclosure if the APR sufficiently exceeds the “average prime offer rate” (“APOR”) of a comparable transaction by 1.5%,\textsuperscript{121} but it might be worthwhile to supplement the enhanced disclosure on these “higher priced mortgage loans” with information emphasizing that the loan’s APR is so much higher than the APRs on comparable transactions. Someone who learns that borrowers with similar credit scores and loan-to-value ratios were able to borrow at substantially lower interest rates might be more likely to continue searching for financing with better terms.

Similarly, a state might require dealerships to disclose to a buyer the average DMV sale price on similar cars whenever the dealership is about to sell a car for more than 110% of the average price.\textsuperscript{122} A buyer who was about to pay $29,000 for a new

\textsuperscript{116} Ian Ayres & F. Clayton Miller, "I'll Sell It to You at Cost:" Legal Methods to Promote Retail Markup Disclosure, 84 NW. U. L. REV. 1047 (1990).
\textsuperscript{117} Markup information is at best an imperfect proxy. An inefficient seller may have high costs, and thus may offer an above-market price even though it is not making an unusually high profit. Or an unusually efficient seller, who has been able to produce a quality good at a lower price, may offer a competitive price even though it is making an unusually high profit.
\textsuperscript{118} Under the Real Estate Settlement Procedures Act, originators were required to disclose both direct compensation and yield spread premiums paid to mortgage brokers for loan originations. See Howell E. Jackson & Laurie Burlingame, Kickbacks or Compensation: The Case of Yield Spread Premiums, 12 STAN. J.L. BUS. & FIN. 289 (2007).
\textsuperscript{119} Although for such competition-enhancing markup disclosure to be effective, the information must be disclosed in ways that it is actually understood and made salient to the borrower. Regulations promulgated by the Department of Housing and Urban Development provide that the “mortgage broker’s fee must be itemized in the Good Faith Estimate and on the HUD–1 Settlement Statement.” 34 C.F.R. Pt. 3500 (2010). It is unlikely that the placement of this information in these forms is an effective manner of conveying the information.
\textsuperscript{121} 12 C.F.R. § 226.35 (2011).
\textsuperscript{122} See Peter Schuck & Ian Ayres, Car Buying, Made Simpler, N.Y. TIMES, Apr. 13, 1997, at F12.
Dodge Ram pickup might be more inclined to continue bargaining or searching at other dealerships if she learned that the average price in the state’s DMV data for the same model with similar features was only $24,000.

Requirements of disclosing markup or comparable price information is consistent with contractual freedom. Contractors are free to contract for any price, but a condition of contracting for presumptively anti-competitive prices is that the seller would need to provide additional information alerting buyers to this possible anti-competitiveness. This kind of disclosure is a penalty-altering rule. Contractors are free to displace the reasonable price default with a high price, but will be penalized if they do not adequately provide buyers with the competition-enhancing information. The costs of compliance with markup or comparable price disclosure militate against imposing such requirements across the board. But in markets where there are concerns that some consumers are being exploited, a persuasive soft paternalism case can be made for such altering penalties.

In rare cases, lawmakers might go even further and require not just disclosure of historical comparable prices but disclosure of contemporaneous offers from other sellers. For example, retail foreign exchange providers could be required to disclose the current spot price at which two currencies are trading if they are about to deviate by more than a specified percentage. Contemporaneous offer disclosure might even take the form of providing bona fide offers from other sellers. The insurance company Progressive voluntarily discloses this kind of information – and thereby signals the competitiveness of its pricing – by providing the premiums currently offered by its competitors. Barry Nalebuff and I have proposed a version of this altering rule for credit cards. Our proposed altering rule would require credit card issuers to disclose the results of a “market test” before they unilaterally raise the interest on a user’s credit card:

At the time when the lender proposes a unilateral change, [the credit card issuer] would be required to put the existing account balance up for auction on a LendingTree-like service that would allow other credit card issuers to bid for a chance to issue a new card and take over the existing balance.

Borrowers would not be forced to switch to the auction winner. They would just be given the option. When an existing credit card issuer proposes a rate increase, it would be required to pass on the terms of the winning bid and a comparison with its own terms, and the borrower would decide whether he wanted to make the switch.

A market test would distinguish between good and bad interest hikes. Issuers would not be deterred from making interest increases that were driven by increased risk because they would not be concerned that competitors would undercut their offers. But unfavorable changes in interest rates or late fees that are just designed to squeeze out

123 The cost of compliance in markup disclosure is higher for non-retailers who must develop attribution rules for production. Markup disclosure carries the additional cost that it may retard the incentives of sellers to search for lower price inputs. Ayres & Miller, supra note 121, at 1081.
higher profits might be deterred. The issuer would have to worry that a competitor would steal the business.\textsuperscript{124}

Our proposal is another example of an altering penalty, because credit-card issuers who attempt to unilaterally raise the pre-existing APR would be penalized if they failed to provide information about the price at which alternative sellers were willing to sell. Contemporaneous offer information is not costless to provide (although in the Internet age, the price of automated market testing and disclosure is drastically falling), but it provides the most direct evidence of whether the contract price is competitive.

While penalty-altering rules at first may seem like esoteric and interventionist policy tools, they resonate with libertarian notions of informed consent. Instead of limiting freedom of contract with mandatory rules backed up with mandatory penalties or forcing opt-out with penalty defaults, the purpose of altering penalties is simply to make sure that contractors are sufficiently informed. The law is agnostic about whether the contractors displace the default so long as they understand the terms of the contract (and possibly whether those terms are competitive). Properly conceived, altering penalties help assure that contracting creates value. Society can infer value creation (in the absence of negative externalities) from the “revealed preference” for the benefits and burdens of a contract. But this revealed preference inference is only appropriate if the parties are sufficiently informed of the legal consequences of their consent. While this section has suggested far-reaching possibilities for improving the quality of contractor consent, the thrust of altering penalties can be seen in very familiar cases. Through the lens of this Article, one could interpret \textit{Williams v. Walker-Thomas Furniture}\textsuperscript{125} as an altering penalty decision in which the seller was penalized primarily for the opaqueness of the cross-collateralization agreement.\textsuperscript{126} From this vantage, altering penalties are the kind of autonomy-enhancing rules. They, like penalty defaults, are the kind of penalties that even libertarians can love.

\textbf{IV. Sticky Defaults As Quasi-Mandatory Rules}

Contractual rules are usually categorized dichotomously as mandatory or default – with the former rules non-alterable and the latter alterable. The standard justifications for mandatory restrictions on freedom of contract are to protect people inside (paternalism) or outside (externalities) the contract. This Part will argue that when externalities and paternalism concerns are not sufficient to support mandatory rules, lawmakers can still at times manage and ameliorate these concerns by creating sticky defaults by using what I will call “impeding” altering rules which artificially increase the difficulty of opt out to


\textsuperscript{125} 350 F.2d 445 (D.C. Cir. 1965).

\textsuperscript{126} The substance of the agreement is much less problematic because (i) overcollateralized loans are the unproblematically the norm in housing markets, and (ii) because the value of any excess collateral levied upon beyond the level of indebtedness would need to be disgorged to the borrower. \textit{See} Douglas G. Baird, \textit{The Boilerplate Puzzle}, 104 \textsc{Mich. L. Rev.} 933, 944-45 (2006) (“Walker-Thomas took the security interest in Williams's other household goods because these assets were exempt [from creditor levy]. If Williams is to give up her right to protect exempt property, she should know that she has the right and that she is giving it up.”).
selectively deter opt out by contractors. Software praxis again helps motivate our analysis. The software programmer’s primary job is to facilitate user autonomy. Programs should set the defaults that most users want and provide low-cost means of displacing those defaults. That is, programmers, like lawmakers in establishing contract law, should ordinarily set majoritarian defaults and cost-minimizing altering rules. The error-reducing deviations from cost minimization in the last Part can all be justified as kinds of soft paternalism. The users themselves would want to have to click twice before opening email attachments to reduce the risk of mistakenly unleashing a virus. The users themselves would want the annoyance of having to click twice to delete a file to reduce the risk of losing valuable work product. A programmer guided by soft paternalism would attempt to make the kind of altering rule choices that users as a class would make for themselves – even if it entails imposing additional transaction costs on those users who in fact want to displace the default. The goal of such soft paternalism ultimately is to allow all users to achieve the default or non-default option that they prefer. Indeed, the purpose of the higher-cost altering rules is to enhance user autonomy by increasing the chance they make informed choices to choose the option that they really want.

But programmers might at times go further and put in place barriers to opting out that seek in equilibrium to impede the user’s ability to achieve certain non-default options. Such altering barriers might be based on the same twin rationales used to justify mandatory rules: externalities and (hard) paternalism. For example, when a user opting out of a default negatively affects other users or the software company itself, the programmer may increase the cost of opt-out to reduce the opt-out rate. Indeed, the Microsoft UX guidelines, in another moment of surprising candor, provide for the possibility of “ulterior motive confirmations” and explain, “While these dialog boxes are presented as confirmations, their real goal is user education or advertisement of features.”

Microsoft’s ulterior motive of advertising features is viewed as a justification for imposing the additional costs on the user. Software users thus encounter “Are you sure you don’t want to upgrade to Quicken 2012?” confirmations because of the ulterior motive of selling product. More benignly, programmers might include higher cost-altering rules that are motivated to dampen opt-outs that disadvantage other users (for example, the confirmation “Are you sure you don’t want to report this problem to Microsoft?” might induce more people to share information that could aid users generally). A hard paternalism justification for prophylactic altering rules would occur if programmers constructed opt-out barriers because they believed that (even with more information) some users would still mistakenly opt out. UX guidelines do not suggest this approach, and it is in some ways understandable when we realize that software

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127 The pure soft-paternalism justification for prophylactic confirmations would have more difficulty justifying why the two-click altering rules are not themselves alterable – that is, why users aren’t trusted with the option of moving to one click. See supra Section I.B (discussing the two-click altering rule in Microsoft Outlook). One might give a soft paternalism justification for the immutability of the two-click altering rule itself. For example, a primary user might be concerned that another family member will opt out of the prophylactic without warning the user, who is then exposed to unwanted risk.


companies are trying to induce customers to buy their products. By definition, consumers dislike barriers prompted by hard paternalism and might be less inclined to purchase software with hard paternalism features. The Apple UX guidelines give voice to hard paternalism concerns when talking about removing choice altogether rather than in guiding it against the users’ wishes.\(^{130}\)

Concerns with negative externalities or (hard) paternalism can also at times motivate lawmakers to implement altering rules that seek to impede some contractors from opting out – particularly impeding contractors who absent the altering-rule obstacles would have opted out. The last Part was predominantly about how soft paternalism concerns could justify deviating from cost minimization in establishing legal altering rules.\(^{131}\) But in this Part, I want to explore how hard paternalism and externalities can justify altering rules that restrict and impede contractor autonomy.

The impeding altering rules make defaults sticky, and in the past, I have (somewhat misleadingly) referred to some defaults as “sticky defaults.”\(^{132}\) But what makes a default sticky, under this reading, has nothing to do with the content or desirability of the default itself. The stickiness of a default derives from the relative difficulty of contracting around – particularly if the altering rules impede fully-informed contractors from contracting for certain non-default effects because of the costs of complying with the impeding altering rules.\(^{133}\) Accordingly, I will sometimes refer to sticky defaults as sticky or impeding altering rules.

It shouldn’t be surprising that paternalism and externalities provide the ur justifications for both mandatory rules and sticky defaults. Sticky defaults properly conceived should be thought of as an intermediate category falling between ordinary defaults and traditional mandatory rules. Indeed, Figure 2 shows how it is possible to place sticky defaults on a spectrum of indicating the legal desirability of private opt-out.

![Figure 2: Legal Desirability of Private Opt-Out With Respect to Four Different Types of Contractual Rules](image)

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penalty Defaults</td>
<td>Mandatory Rules</td>
</tr>
<tr>
<td>(Ordinary)</td>
<td>Sticky Defaults</td>
</tr>
<tr>
<td>Defaults</td>
<td></td>
</tr>
</tbody>
</table>

Penalty defaults are established to encourage private parties to opt out. Lawmakers desire that private parties contract around these defaults to provide information to people


\(^{132}\) The term “sticky defaults” has now appeared in fifty-six articles.

\(^{133}\) This altering-cost definition of sticky defaults is at odds with the way that Omri Ben Shahar used the term. See Omri Ben Shahar & John Pottow, On the Stickiness of Default Rules, 33 FLA. ST. U. L. REV. 651 (2006). Ben Shahar suggested defaults could become sticky not because of anything to do with the necessary or sufficient conditions of altering – but merely because opt-out may in some contexts seem like a “trick.” Id. at 652 (“The fear is that the counterparty will suspect that the proposer’s decision to deviate from the [default] and use an unfamiliar provision hides some unknown problem.”).
inside or outside of the contract. With regard to ordinary default, lawmakers are indifferent as to whether the parties opt out or not. Ordinary defaults (with cost minimizing or soft paternalistic altering rules) attempt to maximize private autonomy to opt out or not. Sticky defaults in contrast attempt to impede some parties who but for the impeding altering rules would have opted out of the default. With regard to sticky defaults, lawmakers want to impede some private parties from achieving particular contractual results. And finally, moving to the far right in the figure, mandatory rules attempt to impede all parties from achieving particular contractual results.

Under this conception, sticky defaults are metaphorically a kind of weigh station on the road to mandatory rules. They are a kind of quasi-mandatory rule that attempt to produce a constrained separating equilibrium allowing some, but a reduced number of, contractors to opt for legal consequences that are dispreferred by lawmakers because of externality or paternalism concerns. Relative to traditional mandatory rules, sticky defaults with their impeding altering rules offer private parties greater freedom of contract. But relative to traditional defaults, sticky defaults restrict private-ordering freedom.

One might reasonably wonder why lawmakers would ever prefer sticky defaults to mandatory rules. If lawmakers are concerned about negative externalities or the ability of non-drafters to protect themselves from certain kinds of opt-out, why not simply prohibit contracting for these dispreferred outcomes? The simple answer is heterogeneity. Contracting parties may experience heterogeneous private benefits from contracting around, they might produce heterogeneous amounts of externalities, or they might produce heterogeneous paternalistic concerns. Heterogeneity of these kinds can produce contexts where it is efficient to erect impeding barriers that disproportionately allow default displacement where there are higher private benefits, lower negative externalities, or lower paternalism concerns. The goal of impeding altering rules will be to disproportionately block the more socially problematic opt-outs, while not blocking the less socially problematic opt-outs.

A. Numeric Example Comparing Relative Efficiency of Sticky Defaults

To see the potential efficiency of quasi-mandatory rules, consider the following stylized numerical example. Imagine that the negative social externality of displacing a default provision $Z$, with the alternative provision $\hat{Z}$, is either $20 per contract or $25 per contract, and assume that, among 100 contracting pairs, there are two contracting types that vary in how much they privately value the alternative provision:

80 of the contractors are “Low” types, and for these types the $\hat{Z}$ provision increases the gains of trade by $5 per contract; and,

20 of the contractors are “High” types, and for these types the $\hat{Z}$ provision increases the gains of trade by $100 per contract.
In this stylized example, lawmakers need to choose how costly to make the altering rule. Imagine that lawmakers can set altering costs at $0, $5.01, or $100.01. To keep the example simple, imagine that there are sufficient gains from trade for all types such that, regardless of the altering costs, all 100 contractors will end up contracting, possibly without contracting around the default. The example assumes away all judicial error and party error. The purpose of the potentially higher-cost altering rules is not to better inform the contractors or the courts, who are assumed to be perfectly informed about the legal consequences of both the default and its alternative — and ignoring alteration costs, all contractors at least mildly prefer \( \hat{Z} \) to provision \( Z \). The sole impact of higher altering costs is to potentially deter some contractors from contracting around the default. Table 4 summarizes the efficiency effects of altering rules with three different cost levels, assuming that contractors only contract around a rule if the private increases in gains of trade from altering exceed the privately born altering costs:

<table>
<thead>
<tr>
<th>Alteration Costs</th>
<th>Contractor Type</th>
<th>Net Efficiency Gain from Altering</th>
</tr>
</thead>
<tbody>
<tr>
<td>( C = 100.01 )</td>
<td>( H (100) ): No</td>
<td>( E = 20 )</td>
</tr>
<tr>
<td>( C = 0 )</td>
<td>( L (5) ): No</td>
<td>( E = 25 )</td>
</tr>
<tr>
<td>( C = 5.01 )</td>
<td>( H (100) ): Yes</td>
<td>1499.80</td>
</tr>
<tr>
<td></td>
<td>( L (5) ): No</td>
<td>1399.80</td>
</tr>
</tbody>
</table>

If altering costs are set at $100.01 (or more), then the default \( Z \) provision effectively becomes a mandatory rule. Not even the high-valuing contractors are willing to incur $101 in altering costs in order to raise their gains of trade by $100. Accordingly, the top row of Table 4 illustrates that there are no additional net gains in efficiency from parties contracting to the alternative provision, \( \hat{Z} \). At the other extreme, if lawmakers set altering costs at $0, then all contractors contract around the default and favor the alternative

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134 One could imagine the altering costs as the arbitrary ink costs of including legally required verbiage in the contract, or alternatively, lawmakers might require altering contractors to publicly burn the requisite amounts of money in order to alter. More realistically, the law might manipulate the cost of discovering the necessary conditions for altering by secreting the information in a labyrinth of different code sections and common law decisions forcing interested parties to retain legal representation in order to discover and implement the altering requisites. Higher costs of discovery are likely to have different distributional effects on repeat and non-repeat contractors as the repeat contracts might well be able to utilize their acquired knowledge altering pre-requisites in repeated contracts.

Failing to specify the words and actions sufficient to alter might also impose probabilistic altering costs because contractors who attempt to displace a default will bear the risk that the court might after the fact hold them to unintended terms. See supra Section III.A (discussing ex post penalties). One could construct examples where only a subset of contractors who had particularly high gains of trade from altering would bear these costs by attempting to alter.
provision. The impact of altering on efficiency turns on the net effect of the private benefits and the social costs of the negative externality. Accordingly, the middle row of Table 4 indicates that when the negative externality from altering is $20 per contract, the net gain from altering is $400 (=20*100+80*5-100*20). This row also indicates that when the negative externality rises to $25 per contract, the net social impact of altering becomes negative. All contractors still costlessly contract around the default, but now the negative externalities drive the net gains to -$100 (=20*100+80*5-100*25). The two top rows of the table are consonant with a standard result of existing scholarship: as negative externalities become more pronounced, mandatory rules tend to become more efficient than default rules. If lawmakers could only choose between two levels of altering costs, they should choose high altering costs when there are high negative externalities and cost-minimizing altering costs when there are relatively low negative externalities. Indeed, in this stylized example, setting altering costs at zero is equivalent to lawmakers flipping the default – because no contractors would choose to contract away from a Ž default.

But Table 4 shows that there is an intermediate level of altering costs that can produce an even higher level of efficiency. If lawmakers set contracting costs at $5.01, then only high-valuing contractors will choose to incur the altering costs. This intermediate level of altering costs thus induces a separating equilibrium, where high and low types in equilibrium end up with different contractual terms – even though they all privately prefer the Ž provision. The net efficiency gains from altering with these intermediate altering costs are $1499.80 (=20*100-20-20*5.01) when the externality is $20 per contract and the efficiency gains are $1399.80 (=20*100-20*25-20*5.01) when the externality is $25 per contract.

Table 4 thus provides an example where a sticky default produces higher efficiency than either a mandatory rule or a cost-minimizing default. Lawmakers’ artificially engineered intermediate altering costs increase efficiency (relative to these two other legal regimes) because they deter low-valuing contractors from altering (when their altering produces externalities that exceed their private benefits) while simultaneously allowing altering by the high-valuing contractors (whose private benefits exceed the negative externalities). When the negative externalities are relatively high ($25 per contract), the sticky default dominates the second-place mandatory rule because it grants more contractual freedom to high types. When the negative externalities are relatively small, the sticky default dominates the second-place (Teflon) default because it grants less contractual freedom to the low types.

This numeric example shows that in the face of negative externalities, it can be efficient for lawmakers to set a minoritarian default (which none of the contractors privately prefer) and combine it with artificially elevated altering costs. Without the altering costs, the minoritarian default would operate as a kind of penalty which encourages contractors to contract around the default. But when the dispreferred default is combined with the elevated altering costs, it induces a separating equilibrium with the limited opt-out.136

135 See Ayres & Gertner, Filling Gaps, supra note 3.
136 In Strategic Contractual Inefficiency, supra note 3, Rob Gertner and I have an example where increasing costs of contracting around can improve efficiency – but it does so by producing a more efficiency pooled
The use of intermediate altering costs is reminiscent of, but importantly different from, Pigouvian or effluent taxation. A simple and time-honored mechanism for solving externality problems would be for lawmakers to treat the contracting for provision Z as a kind of pollution and to impose effluent taxation equal to the size of the activity’s social harm. In simple models, effluent taxation can produce first-best efficiency because, as with the example above, only contractors with high benefits would be willing pay the tax – and the desired efficient separating equilibrium would ensue. From a social efficiency perspective, increasing altering costs is different from imposing a tax because taxes are mere transfers of value, while sticky defaults actually require the consumption of real transaction resources. So while this costly altering rule produces the same separating equilibrium as the efficient effluent tax, it is not first-best efficient because the high-value contractors throw away value in the process of contracting. One reasonable response to the example is that lawmakers could produce even more efficiency by imposing a Pigouvian tax instead of using the impeding altering rules. However, they should remember that taxation is not institutionally or political feasible for all lawmakers. Sticky defaults, while second-best, still can produce (substantially) greater efficiency than mandatory rules or cost-minimizing defaults. From the perspective of effluent taxation, the example teaches that the efficiency enhancements from creating a separating equilibrium can be strong enough to overcome the additional headwind of “wasted” transaction costs.

This will not always be so. Sticky defaults will not always be more efficient than mandatory rules or cost-minimizing defaults. But this numeric counter-example is sufficient to show that there will be times when lawmakers will in essence want to make a rule mandatory for some subset of contractors while making the same rule contractible with regard to another subset of contractors. In such circumstances, the sticky default with artificial barriers to opting out is an additional tool to achieve that end.

B. Possible Applications of the Sticky Default Strategy

This foregoing example so abstracts from reality that readers may have trouble relating the numeric possibility to real world contexts. Can particular contract terms produce negative externalities? Can lawmakers manipulate the size of altering costs? Will the impeding altering rules associated with sticky defaults impede the appropriate contractors from contracting? Are there any real-world examples of sticky defaults cum impeding altering rules in the current law? This section begins to provide some answers.

To see the possibility of negative social externalities from private contracting provisions, one needs go no further than the current mortgage crisis. The mortgage contracting provisions concerning balloon payments or the degree of leverage can negatively impact systemic risk.\textsuperscript{137} Moreover, the previous externality example might be modified to model heterogeneous paternalism concerns as a lawmaker’s basis for implementing impeding altering rules. Instead of varying the private benefits or the social costs from altering, one can imagine circumstances where a subclass of less sophisticated or more behaviorally-biased consumers are more likely to enter into

contracts with party error. While the earlier example concerned altering that produced negative externalities, the paternalism concern for a subgroup of consumers is that altering will produce negative internalities – in that people internal to the contract are not trusted to protect their own interests.

Heterogeneous paternalism concerns naturally suggest what Colin Camerer and co-authors have called “asymmetric paternalism” policies. Sticky defaults might ameliorate the heterogeneous paternalism problem if altering barriers work to hinder opt-out by those contractors where the paternalism concern is high, while allowing opt-out by those contractors where the paternalism concern is low. However, some forms of impeding rules will not be well-tailored to disproportionately prevent opt-out from the contracting pairs where paternalism concerns are the strongest. For example, if the concern is that some buyers are unrealistically optimistic about the benefits from a particular opt-out, then those optimistic buyers because of their overvaluation may be the least deterred by elevated altering costs from opting out.

In other settings, however, there will be a better means/ends fit that might allow more plausible sticky default interventions justified by paternalism. A direct way for policy makers to induce the kind of separating equilibrium sought for is to impose different altering rules on different contractor types. The law might make it harder for the young or the less sophisticated to achieve certain contractual ends by imposing more burdensome formalities as a prerequisite for contracting. Tailored altering rules that treat different contractors disparately can make defaults stickier for subsets of concern.

Less directly, it may be possible for legislators to craftuntailored altering rules which impose disparate impacts with regard to the availability of opt-out. For example, if the contractor bias is correlated with lack of legal sophistication, then lawmakers might be able to disproportionately impede biased contractors from opting out by crafting more opaque altering rules that are more difficult for less sophisticated contractors to find. Instead of impeding opt-out with higher out-of-pocket altering costs, as suggested by the model, lawmakers might impede opt-out by failing to transparently disclose the conditions for effective altering. Computer programmers adopting for “progressive programming” analogously make it disproportionately difficult for less sophisticated users to opt-out of certain defaults. By burying the opt-out software mechanisms in secondary and tertiary dialog boxes, programmers intend to limit such options to more sophisticated users. Analogously, the law can make opt-out mechanisms more opaque by burying the description of altering rules in common-law decisions or going even further and failing to provide safe-harbor instructions on how to achieve legally dispreferred options. Thus, in *Peevyhouse v. Garland Coal Co.*, the majority opinion in limiting damages to “diminution in value” when “the economic benefit which would result [from] full performance of the work is grossly disproportionate to the cost of performance,” nonetheless concluded that parties remain free to contract for cost of performance damages:

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138 Camerer et al., supra note 131; see Thaler & Sunstein, supra note 131; Sunstein & Thaler, supra note 26.
The rule . . . does not interfere with the property owner's right to "do what he will with his own" or his right, if he chooses, to contract for "improvements" which will actually have the effect of reducing his property's value. Where such result is in fact contemplated by the parties, and is a main or principal purpose of those contracting, it would seem that the measure of damages for breach would ordinarily be the cost of performance.  

But the Peevyhouse opinion, like the Jacob & Youngs decision discussed before, fails to provide the altering language that future parties could use to achieve the larger cost of performance damages. From the perspectives of cost-minimization or autonomy maximization, leaving the altering rule unspecified is presumptively inefficient. But from the perspective of a lawmaker who is concerned about externalities or paternalism, the same failure may be seen as establishing a quasi-mandatory rule which may attempt to selectively impede a subset of contractors from contracting around a legally preferred default. Notwithstanding my earlier proposal for contracts decisions presumptively advising future parties on how to achieve the substantive interpretation desired by the losing party, courts might overcome this presumption when they have credible concerns about externalities or paternalism. However, courts would probably be better disciplined if they were more explicit in providing reasons why they were choosing to make the altering rules opaque in a given case. While externalities or paternalism might justify a judicial choice to withhold altering instructions, neither Jacob & Youngs nor Peevyhouse were well suited for such altering opaqueness. As convincingly described by Schwartz and Scott, the parties in Jacob & Youngs had included a mechanism where an architect had to certify the adequacy of completed work as a condition of the buyer’s duty to pay. The architect as a repeat player in the market has both professional licensing and reputational incentives to remain neutral. The decision does not suggest sufficient evidence of paternalism or negative externalities to justify why Cardozo did not explain how future parties could have written an effective architect certification clause. Under my reasoning, Cardozo’s Jacob & Youngs decision is wrongly decided in two different senses. First, as persuasively shown by Schwartz and Scott, it was wrong by not announcing that the existing provisions of the contract were sufficient to make the duty to pay conditional on architect certification. The correct decision on this issue would have been one announcing a kind of sufficiency altering rule. But second, Cardozo compounded this error by not giving future parties a template for how they could achieve the alternative (conditional payment duty) result.

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140 382 P.2d 109, 114 (1962) (internal citation omitted).
141 See supra Part II.
142 In my “Empire or Residue” lecture, I suggested that “an interesting issue for further research is whether there might be other reasons why the law would intentionally make difficult or unclear how to contract around default rules.” See Ayres, supra note 1, at 906. This section is my attempt to answer that question.
143 Schwartz & Scott, supra note 84, at 615-16.
144 Contractor/sellers as repeat players are sufficiently sophisticated and the likelihood of non-payment sufficiently salient that courts have insufficient reason to restrict their contractual freedom on hard paternalism grounds. Moreover, while forfeitures can have third-party externalities, there was no reason to think that they needed to be particularly pronounced in this circumstance – especially because contractors might have insured against the risk of such nonpayment.
Analogously, in *Peevyhouse* the judges had insufficient justification on either paternalism or negative externality grounds for failing to provide sufficient altering rules to achieve cost of performance damages. The coal companies as repeat players in strip-mining contracts do not need the paternalistic solicitude of the courts. And if anything, the negative externalities run in the other direction. While there might be some negative externalities (for example, in loss of jobs) from exposing corporations to disproportionate or excessive damages, the more obvious externality is the environmental loss from not reclaiming the land after strip-mining. At a minimum, the court might have provided a mechanism for specific performance of the reclamation provision to give future parties a means to assure that the cost of performance is actually used to perform the reclamation promise.\(^{145}\)

The altering strategies of Part I were dominantly legal formalities – serving the tripartite Fullerian functions. The transaction-cost/error cost tradeoff at the heart of that analysis can be restated as whether the marginal cost of additional formalities are worth the marginal enhancements of their cautionary, evidentiary and channeling functions. The analysis of the previous part could be restated as whether contracting parties would agree to deviations from transaction cost minimization. But the altering strategies of this Part are substantive in nature (in the same way that mandatory rules are substantive). Sticky defaults with their attendant impeding altering rules try to impact the contracting equilibrium – constructing barriers which disproportionately discourage some provisions that fully informed contractors would choose in a regime with more contractual freedom.

V. Discriminatory Altering Rules

One of the values of theorizing altering rules as a distinct category is that it not only allows for the development of better tailored interventions, but theorizing altering rules can also make visible legal issues that have as yet gone unnoticed. Framing existing legal conflicts in terms of altering categories is not likely to be particularly enlightening. It would be possible to characterize several constitutional disputes concerning the burdening of fundamental rights in altering terms.\(^{146}\) For example, in *Planned Parenthood v. Casey*, the pivotal opinion of Justices O’Connor, Kennedy and Souter found that a statute that has “the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus’ constitutes an undue (and therefore unconstitutional) burden on a woman’s right to decide whether to have an abortion.”\(^{147}\) One can consider statutes that mandate that women be given counseling before an abortion as a kind of altering rule. Under this reading, the mandated counseling is a necessary (altering) prerequisite to the woman’s ability to opt out of the no abortion default. Under the *Casey* standard, one can ask whether the purpose or effect of the counseling requirement is to impede or merely to assure that abortion consent is fully informed. Through the altering lens, it is easy to see that many of the abortion statutes

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\(^{146}\) Michael C. Dorf, *Incidental Burdens on Fundamental Rights*, 109 HARV. L. REV. 1175 (1996). Similarly, Article IV, Section I of the United States Constitution establishes not only a default (that “Full Faith and Credit shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State”) but also altering rules (“Congress may by general Laws prescribe . . . the Effect thereof”).

\(^{147}\) Id. at 1219 (quoting Planned Parenthood v. Casey, 505 U.S. 833, 877 (1992)).
track the strategies (including cooling-off periods) discussed above. The translation into altering-speak, however, adds little value in determining whether the restrictions are unconstitutionally infirm.

But in other contexts, reconceptualizing law in terms of altering rules can make visible legal issues that have largely gone unnoticed. This Part will give two examples of this visualization value by exploring the relationship between tailored rules and discrimination. It has long been understood that the law might tailor defaults to provide different presumptive rules for different classes of contractors.\textsuperscript{148} For example, Michael Barr and his coauthors have suggested in the mortgage context the potential usefulness of “smart defaults”:

\begin{quote}
With a handful of key facts, an optimal default might be offered to an individual borrower. The optimal default would consist of a mortgage or set of mortgages that most closely align with the set of mortgages that the typical borrower with that income, age, and education would prefer. For example, a borrower with rising income prospects might appropriately be offered a five-year adjustable-rate mortgage.\textsuperscript{149}
\end{quote}

Tailoring the default terms of a contract to different types of parties might be a way of more granularly providing the terms that individual contractors want (or imposing more exquisitely tailored penalties to induce contracting).\textsuperscript{150}

Tailoring is discrimination by another name. To provide different defaults to different contractor types is for the law to discriminate between the two types in the provision of defaults. Tailored defaults treat different contractors disparately by presuming different meanings of their silence. So an initial question posed in the abstract is whether discriminatory defaults based on traditionally protected characteristics violate our civil rights laws. But we can go further and ask the analogous altering question. An additional value of this Article is seeing that the law might also discriminate in the altering rules it has established. Whether or not the law discriminates among contractor classes in default setting, it might independently establish disparate mechanisms for different contracting types to opt out. Do discriminatory altering rules violate the law? Do non-discriminatory, but impeding altering rules (which artificially increase the difficulty of altering) violate the law if they have unjustified disparate impacts or make it more difficult for contractors to avoid the effect of discriminatory defaults? The core of this section is to ask these questions in two contexts that my family members and I have personally confronted.

A. Missouri’s 1993 Marriage Defaults

\textsuperscript{148} See Ayres & Gertner, Filling Gaps, supra note 3; Ayres & Gertner, Strategic Contractual Inefficiency, supra note 3; Ayres, supra note 9.

\textsuperscript{149} Barr et al., supra note 106, at 45.

\textsuperscript{150} It is useful to distinguish tailoring from setting standards – in part because the law could choose to have defaults that are tailored standard. See Ayres, supra note 9. Under a tailored standard regime, the law would provide different default standards to different contractor types.
When Jennifer Brown and I married in Missouri in 1993, the state provided both defaults and altering rules that discriminated on the basis of sex. The application for a marriage certificate, which had to be signed both the husband- and wife-to-be, included a box that had to be checked if the wife-to-be was to retain her premarital name. If the box was not checked, the wife-to-be’s legal name would automatically be changed at the time of marriage to that of the husband-to-be. There were no naming boxes on the form concerning possible name changes of the husband-to-be. If the husband-to-be wished to change his premarital name to that of his spouse, he would need to separately petition the court to change his legal name.

By now, the reader should be able to see that Missouri provided both discriminatory defaults and discriminatory altering rules. The naming defaults discriminated on the basis of sex, because the man by default retained his premarital name, while the woman’s name by default changed to that of the husband-to-be. But more subtly you should see that the naming altering rules also discriminated on the basis of sex. The latter was not a foregone conclusion. A state might establish discriminatory defaults, but non-discriminatory altering rules. Missouri might have added to the same application form a box that if checked would automatically change at marriage the man’s name to that of his wife-to-be. But instead Missouri offered two very different types of altering rules.

At first glance, the altering rule for the wife-to-be seems less burdensome than that of the husband-to-be. She just needs to check a box, while he needs to separately petition the court. But one gains a different perspective, if one looks at the signature requirements under the two rules. Both rules require two signatures to opt out – but the law requires different kinds of signatures when opting out of the female default than when opting out of the male default. To contract around the female default so that the wife-to-be will retain her premarital name, the law requires not just that a box be checked on the application, but that the application must be signed by both the prospective spouses. In contrast, to contract around the male default so that the husband-to-be will change his name to that of his wife-to-be, the law requires only the signature of the husband-to-be (on the separate petition to change his legal name) and the signature of a judge (granting the petition). The altering rules discriminate on the basis of sex because a husband-to-be by withholding his signature could formally veto his wife’s attempt to opt out, while in contrast a wife-to-be cannot block her husband’s attempt to opt out.

Stepping back, one can ask whether the state’s naming discrimination was unconstitutional. Some courts might resist even framing the issue in these terms. They might view the collection of state practices as not even really discriminating because a woman is free to choose either to retain or change her name. Implicit in this kind of conclusion is the thought that default discrimination creates at most de minimis harm. Bennie Black famously described corporate law defaults as “trivial” because corporations could so easily opt out that the legal choice of default had in equilibrium no impact on the substantive choices of corporations. Courts analogously might view the state policies as discriminatory in at most this trivial sense. One could counter that civil rights law at

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151 I speak of the spouses to be in gendered terms – because at that time (as is sadly true today) my home state of Missouri did not see fit to extend equal marriage rights to same-sex couples.

times has been concerned about symbolic harms – for example, where same-sex partners “merely” have to use different words to describe their legal relationship that is substantively equivalent to marriage. We can also see that the state policies discriminate not just in the default married names, but in the altering rules governing opt-out. As a formal matter, the disparate state treatment on account of sex should trigger intermediate scrutiny under the Equal Protection Clause. 153 The State of Missouri would bear the burden of showing that the discriminatory defaults and altering rules were “substantially related” to an “important” government interest. 154 Again, making visible the discriminatory altering rules clarifies the nature of the state’s burden. If a court reached the scrutiny issue, the state would need to justify why it imposed different signature requirements on the two different forms of opt-out. Indeed, asking the formal intermediate scrutiny question flips the triviality argument and forces the state to explain how differing defaults could further an important government interest.

While I am inclined to think that the state could not meet its constitutional burden, the larger point here is that altering rule analysis has helped in framing the rules. While behavioral economic scholars have come to see the power of defaults, this Missouri marriage example shows that discriminatory altering rules can be more problematic than merely discriminatory defaults. Indeed, if Missouri had discriminatory defaults but non-discriminatory “check the box” opt-out rules, it would probably be harder to convince the judge to see state discrimination. In contrast, if the state had non-discriminatory “keep your premarital name” defaults for both husbands- and wives-to-be, but imposed more onerous requirements on women who wanted to switch to their spouses’ names, it will be easier for a court to see the discriminatory altering rule as a potentially unconstitutional burden.

B. McDonald’s Happy Meals Defaults

In the fall of 2008, my daughter, Anna Ayres-Brown, who at the time was 11 years of age, wrote to Jim Skinner, the Chief Executive Officer of McDonald’s Corporation, and asked him “to change his policy regarding Happy Meals.” 155 Anna said:

Every time I go to McDonalds [sic] and order a Happy Meal through drive through, McDonald’s employees ask me or my parents whether we want a girls toy or a boys toy. I believe that this could be very hurtful to many kids, because it is a way of restricting kids to stereotypes of what kids of their gender should be interested in. 156

On January 2, 2009, Anna received a response from a McDonald’s Customer Satisfaction Representative suggesting that Anna’s experience was counter to McDonald’s express corporate policy: “When we offer a happy meal with two different themes, our employees have been specifically trained to ask customers which of the two toys offered that week

154 Craig, 429 U.S. at 197.
155 Letter from Anna Ayres-Brown to Jim Skinner, CEO, McDonald’s Corp. (undated) (on file with author).
156 Id.
they would like, and not whether they would like a “girl” toy or a “boy” toy.”

Anna and I were unsatisfied with this response and visited ten local McDonald’s at a time when the stores were offering as toys either a Digi Sport™ electronic soccer game or a Hello Kitty™ electronic wrist watch. We found at the drive-through that nine of the ten stores asked whether the meal was “for a boy or for a girl.” One of the ten stores asked whether we wanted “a boy’s toy or a girl’s toy.” None of the visited McDonald’s followed the professed corporate policy of describing the toys themselves – as in asking, “Would you like a Digi Sport soccer game or a Hello Kitty watch?”

Anna and I ultimately filed a complaint before the Connecticut Commission on Human Rights and Opportunities, claiming that McDonald’s restaurants violated our civil rights by engaging in sex discrimination in public accommodations in violation of Connecticut law. While there is no federal statute prohibiting sex discrimination in public accommodations, Connecticut, like many other states, prohibits such discrimination. The Connecticut Human Rights Statute and regulations promulgated pursuant to the statute makes it illegal to be denied “the full and equal enjoyment of goods, services or facilities offered to the general public because of your . . . sex.” In our complaint, Anna and I claimed that we had encountered three types of Happy Meal discrimination. We claimed that McDonald’s restaurants were:

1. discriminating in counter service by giving different toys (without asking customer preference) based solely on the sex of the customer or the customer’s child; 2. discriminating in drive-thru service by asking whether the toy is for a boy or girl, and giving a different toy based on the answer, and 3. discriminating in drive-thru service by asking whether the customer prefers a boy’s toy or a girl’s toy.

These three behaviors raise a host of legal issues. But my purpose here is show that viewing the claims through a default/menu/altering lens clarifies the actual situs of the

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158 I also posted an item at the New York Times Freakonomics blog requesting information from readers on their experiences ordering Happy Meal toys from McDonalds. Ian Ayres, Our Daily Bleg: Happy Meal Toys, FREAKONOMICS BLOG (Feb. 11, 2009, 10:07 AM), http://www.freakonomics.com/2009/02/11/our-daily-bleg-happy-meal-toys. Of 79 reader responses, approximately one-fifth of the time McDonald’s employees did not ask a toy related question. But when employees did ask a toy related question:

47.7% Asked “Is It for a Boy or Girl?”
31.8% Asked “Do You Want A Boy’s Toy or a Girl’s Toy?”
15.9% Described the toys in non-gender terms (as per McDonald’s claimed policy).

159 Complaint, Ayres-Brown v. McDonald’s Corp., CHRO No. 0930361 (on file with author) [hereinafter Ayres-Brown Complaint].
162 Ayres-Brown Complaint, supra note 188, at 1-2.
potential discrimination. I want to assess whether McDonald’s offers or the conditions it placed on customer’s means of acceptance were discriminatory. Just as the law can be seen as offering contractual parties defaults and altering rules governing how the default can be contracted around, it is possible for private sellers to offer products or services with a set of default attributes as well as simultaneously providing altering rules which allow an offeree to accept alternative attributes. Thus, a restaurant can set default attributes for an item it offers, and separately provide a menu of substitutions, as well as disclosing a means for altering the default attributes. So an initial task is to think about what were the defaults, menus and altering rules associated with each of the alleged behaviors.

The first claim relates to counter discrimination. Imagine that when an eleven-year-old girl asks to buy a Happy Meal, McDonald’s without asking her a question includes a Hello Kitty watch. In contrast, when an eleven-year-old boy places the same order with the same words, McDonald’s (again without asking a toy-related question) includes a Digi Sports watch. Finally, imagine that if either child affirmatively asks, McDonald’s would switch the initially proffered toy for the alternative. These facts would represent a discriminatory default.\textsuperscript{163} If child counter customers are silent, McDonald’s treats them differently because of their sex. But because the disparate treatment merely concerns the default toy selection, it raises the same questions we encountered above of whether default discrimination imposes more than de minimis injury – in that children can have the alternative toy by just asking.

In fact, Anna at times found that “just asking” was insufficient. In one instance, after Anna had expressly asked a counter employee for a “boy toy,” another employee nonetheless gave Anna the Hello Kitty watch saying to Anna, “I almost made a mistake and gave you a boy’s toy.” If Anna had reiterated that she wanted the other toy, she probably could have succeeded in obtaining the “boy toy.” But the fact that Anna would have to ask twice might be seen as an impeding altering rule. The deviation from cost minimization (“Are you sure you want a ‘boy’s toy’?”) coupled with discriminatory defaults are harder to square with conception of de minimis injury.\textsuperscript{164}

The second two claims relating to McDonald’s drive-through policies raise more vexing problems of characterization. Unlike the discriminatory counter default, the drive-through toy policy is a kind of affirmative-choice no-toy default. By default, McDonalds resists including any toy when the customer refuses to respond to a toy choice question.\textsuperscript{165} Unlike the counter claim, the drive-through claims are not about a discriminatory default. Instead, the drive-through claims force us to question whether discriminatory menus or altering rules can give rise to civil rights concerns. The second and third claims are claims about menus that include altering rules.

\textsuperscript{163} The counter context sometimes include non-discriminatory toy “menus” in that the panoply of toy offerings is sometimes visible on an enclosed display; but altering rules are not expressly communicated at the counter.

\textsuperscript{164} The presence of non-discriminatory but impeding altering might shift the burden to defendant to show that the additional confirmation was empirically justified in reducing Type I error, see \textit{supra} Section II.E to check to see whether Type I or Type II.

\textsuperscript{165} I have tested this by responding to drive-through toy questions with sentences like “I’m not comfortable answering that kind of question.” Drive-through employees tend to insist on customers making some kind of an affirmative choice before they will complete your order.
When a drive-through employee asks whether the Happy Meal is “for a boy or for a girl,” the employee is suggesting (at least to drivers who understand that Happy Meals come at times with gendered toys) the verbal means that patrons can use to opt for an alternative to the no-toy default. This toy question is an oral menu of default alternatives. While the earlier discussion emphasized that menus of default alternative might or might not include altering rules, the toy question is a menu that includes altering rules. The question suggests that “for a boy” or “for a girl” are the expected responses.

Does the “for a boy or for a girl” question represent actionable discrimination? On the one hand, the question on its face is not about toy choice, but is simply asking for the sex of the consumer. If some customers, perhaps unaware of the toy choice convention, provide naïvely truthful answers, then McDonald’s will treat these naïve truth tellers differently because of the sex of their children. In terms of the foregoing analysis, the menu exacerbates the risk of party error, because customers are not adequately informed of what turns on their response. The rental agent who sought out online applicants’ race and then treated reported races differently would straightforwardly violate the Fair Housing Act – even if the applicants were free to report any race initially. Even more sophisticated customers, who understand that their answer will determine the included toy, may bear extra costs because of the form of the altering rule. The suggestion is that the parent of a boy must say that the Happy Meal is “for a girl” in order to receive the Hello Kitty toy. Parents who have qualms about misrepresenting the truth or are disinclined to take the extra hassle of saying “It is for a boy, but I’d like the girl’s toy” will be more likely to stick with gender-specific toy choice. The altering rule is thus likely to disparately impact against customers who want to choose gender-non-compliant toys.

The third claim challenging the “boy’s toy or girl’s toy” question raises perhaps the most novel civil rights issues. Here the menu and suggesting altering rules expressly concern toy choice, and on their face, do not make toy selection contingent on the sex of the consumer. Neither the menu nor the altering rules constitute traditional disparate treatment – if customers understand that a girl can order a boy’s toy (and vice-versa). Nonetheless, the gendered framing of the question raises civil rights concerns. As before, it is possible that such altering rules create disparate impacts on account of sex. This could happen, for example, if girls were disproportionately likely to order non-conforming toys when asked to use a gendered altering rule (relative to altering rules that describe the toy choice in non-gendered terms).

<table>
<thead>
<tr>
<th>Hypothetical Example in Which Different Altering Rules Produce Different Proportion of Gender-Non-Compliant Toy Choice</th>
<th>Altering Rules</th>
<th>Boys/Girls Toy</th>
<th>Soccer Game/Hello Kitty Watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Gender</td>
<td>Boy</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Girl</td>
<td>10%</td>
<td>25%</td>
</tr>
</tbody>
</table>

166 There may be customers who might think that it would be lying to request a boy’s toy if the consumer is a girl. For example, at some restaurants it would be lying to say you wanted the child-size portion when the consumer is an adult because the child-size portions are limited to consumers under a certain age.

167 For example, the following table conjures a hypothetical in which drive-through customers are disproportionately likely to choose gender non-compliant toys (which in this example would mean Digi Sports Soccer Game for girls and Hello Kitty Watch for boys):
But even without a disparate impact showing, one can imagine challenging the menu and altering rules because they induce a kind of cognitive disparate treatment in the customers themselves. In order to comply with the suggested altering rule, and characterize one’s preference as for a “boy’s toy” or “girl’s toy,” altering rules force customers to think in terms of sexual categories. In Anna’s initial letter to the McDonald’s CEO, she asked, “Would it be legal for you to ask at a job interview whether someone wanted a man’s job or a woman’s job?” Most law professors and law students think that such a question would violate Title VII. But it’s harder – especially without thinking in terms of altering rule and menus to pin down exactly why. Imagine a hypothetical where Sears was accepting applications for salesmen and secretaries. Applicants of either sex were free to apply for either type of job and would have equal merit-based opportunity to receive either job type. But imagine that the application sought an applicant’s preference by asking whether the applicant was interested in a “man’s job” or a “woman’s job.” The employer’s form does not itself engage in disparate sexual treatment – because the same form (that is, menu) is given to all applicants and because the pool of applicants interested in a particular job are hired independent of their sex. The defendant would argue as in McDonald’s that any applicant regardless of his or her sex could apply (and be fairly considered) for either type of job. A strong tradition in the common law is to view the offeror as “master or her offer” – meaning that the offeror is free to place any pre-conditions for acceptance that she wishes. Thus, an offeror is free to specify that acceptance can only be accomplished by skywriting in fifty-foot letters, “I accept.” But Anna’s question suggests that Title VII may limit the altering rule conditions that offerors might place on their offers. An offer that can only be accepted by saying “Women do not deserve the right to vote” is troubling because it forces accepting offerees to think and speak in gendered terms as a condition of contracting.

The man’s job/women’s job application form might easily be challenged under disparate impact law, if plaintiffs could show that the gendered altering rules produced unjustified disparate impacts in job choice relative to more traditional job descriptions. But the more interesting question is whether plaintiffs could challenge the form (menu and associated altering rules) under a disparate treatment theory. Our answer might depend in part on the market at hand. A toy store that organizes and labels its planogram layout explicitly in terms of “boy’s toys” and “girl’s toys” might be treated differently than an employer who labels its employment openings in terms of “men’s jobs” and “women’s jobs.”

While Anna and I believe that the allegations in our complaint made out colorable claims of violations, the Connecticut Commission on Human Rights and Opportunities disagreed. On September 15, 2009, it summarily dismissed our complaint without a hearing. The Commission’s decision noted that it was not inclined to “engage its resources for the purposes of titillation or sociological experiment.”

Rather than definitely resolve the appropriate contours of public accommodation law, my limited claim instead is that thinking more explicitly about defaults, menus, and

Even though the no-toy default requires an affirmative consumer choice, this example shows that the gendered menu/altering rules make the gender compliant choice “stickier” – particularly for girls who would be much more willing to opt for a “Digi Sports soccer game than for a “boy’s toy.”

altering rules can help clarify the nature of the questions to be resolved. Discrimination need not take the form of discriminatory mandatory rules. The two examples taken from my family life show that discrimination might also arise with respect to defaults, menus and altering rules. Just seeing this possibility can help focus our attention to the question of whether we want to do something about it.

VI. Conclusion: Altering Rules Matter

The revolution in behavioral economics often points to the power of default settings in changing equilibrium behavior without formally restricting contractual freedom. Want to induce more people to contribute to their 401(k) plan, change the default from presumed non-contribution to presumed contribution. Want to induce more people to donate their organs for transplantation when they die, change the default from a presumption of non-consent to presumed consent.

Too often, however, default theorists (including me) have failed to consider the impact of the mechanism that the law might allow or demand for contracting around defaults. The law need not – and often does not – passively respond to all and any altering attempts by simply providing the interpretation that most likely reflects the parties’ manifested intent. The law can choose to impose exclusive or non-exclusive modes of displacement – adding necessary and sufficient conditions for altering. The law can include altering instructions on a menu of substantive default alternatives or not. To reduce the risk of party error, the law can – and at times does – require conspicuous, unambiguous, or carefully negating altering rules. But the law can go further and require “thought-inducing,” “train and test,” or “arbitrary” altering rules to even more reduce the likelihood of party error (albeit at the cost of increased transaction costs). The law can even impose altering penalties if the attempt at default displacement fails to meet requisite preconditions. When externalities or paternalist concerns are sufficiently great, lawmakers can, instead of imposing mandatory rules, create sticky defaults by using “impeding” altering rules which seek to deter a subset of contractors from opting for an alternative (which absent the altering rule they would have preferred).

The proliferation of these adjectival altering categories underscores the richness of the altering toolbox that is available to lawmakers. But this Article has attempted to do more than just catalog a dry descriptive list of possibilities. Part I used a fairly simple model to show when the goal of minimizing altering costs should give way to interest in minimizing party- or judicial-error. And Part IV showed that externalities or paternalism concerns might at times justify even more costly altering rules which seek not to better educate the parties, but to partially restrain opt-out. The larger point is that lawmakers

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not only have the option of deploying a diverse set of altering rule tools, but that these tools can be valuable. The kinds of altering rules described above are more than theoretical set-spanning possibilities, they are tools that should be considered for use in particular contexts.

Finally, the descriptive richness of altering rules places new demands on law students and practitioners who merely want to know the content of the law. To fully understand the mailbox rules, a lawyer must know not only the content of the rule itself and whether it is merely a default, but the necessary and sufficient conditions for contracting around it. One cannot effectively practice as a transactional lawyer or as a litigator or as a judge unless one can identify the likely legal response to particular opt-out attempts. Indeed, as shown in the prior discrimination examples, some issues are easier to identify through a lens that more crisply distinguishes defaults from menus from altering rules.

Like the Molière character had for years been speaking prose without knowing it, lawmakers have been regulating opt-outs for years without having a specific term for this type of regulation. Indeed, many of the examples of altering rules that I have analyzed come from actual practice — including the actual practice of software programmers. A central goal of this Article is to show that explicitly thinking of altering rules as a distinct category of rulemaking can pay large dividends. The setting of an altering rule is too complex for lawmakers to simply say the law should do what the parties say. The optimal setting of altering rules will be made in conjunction with the setting of optimal defaults and both the default and the altering rules will tend to grow out of the problems the lawmaker is trying to solve. A closer understanding of altering rule theory may ultimately strengthen our theories of default choice. This is true in part because any tool that one discovers that has application to altering questions may also have application to default setting as well. For example, the idea of intermediate “impeding” costs of contracting around might lead us to think whether there should ever be intermediate penalty defaults that attempt to only induce a portion of contractors to contract around.

It is time that contract theory tackles the “how to displace” question that attends each and every default that the law creates. While my examples have for the most part focused on traditional contractual settings, a better understanding of “altering” theory has implication for political and corporate governance. Corporations cannot do certain things without altering their charters. States and the federal government cannot do certain things without altering their constitutions. Through the lens of this Article’s analysis,

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171 MOLIÈRE, LE BOURGEOIS GENTILHOMME act II § IV:

Tout ce qui n'est point prose, est vers; et tout ce qui n'est point vers, est prose. (All that is not prose is verse; and all that is not verse is prose).

Par ma foi, il y a plus de quarante ans que je dis de la prose, sans que j'en susse rien.

(Good heavens! For more than forty years I have been speaking prose without knowing it.).

172 Under Delaware corporate law, the default rule is that directors are liable to shareholders for duty-of-care violations, and the altering rule is that corporations can opt out of director duty-of-care liability through a charter amendment. DEL. GEN. CORP. L. § 102(b)(7).

173 Under the U.S. Constitution, “[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people,” U.S. CONST.
it is natural to ask whether these altering provisions which make it more arduous to displace a default can be justified as error-minimizing strategies or as impeding altering rules. Error-minimizing arduousness would be based on a type of soft-paternalism; while the later form of arduousness would artificially attempt to impede the actors from changing the rule based on externalities or hard-paternalism. Through this lens, one might also ask in different ways whether imposing these extra altering requirements are justifiable.174

This Article is not the definitive word on altering rules. Instead, I have tried to begin a normative conversation about what the content of altering rules should be. My goal is to have contract theorists and lawmakers think more explicitly about how best to regulate opt-out. Proposing a taxonomy and at least the beginnings of normative analytics is a good place to start.

174 Sanford Levinson points out that there are also costs to making those altering rules too arduous. See, e.g., Sanford Levinson, Still Complacent After All These Years, 89 B.U. L. REV. 409 (2010); Sanford Levinson, The Political Implications of Amending Clauses, 13 CONST. COMMENT. 107 (1996).