

University of Chicago Law School

Chicago Unbound

Public Law and Legal Theory Working Papers

Working Papers

2018

Personalizing Mandatory Rules in Contract Law

Omri Ben-Shahar

Follow this and additional works at: https://chicagounbound.uchicago.edu/public_law_and_legal_theory



Part of the [Law Commons](#)

Chicago Unbound includes both works in progress and final versions of articles. Please be aware that a more recent version of this article may be available on Chicago Unbound, SSRN or elsewhere.

Recommended Citation

Omri Ben-Shahar, "Personalizing Mandatory Rules in Contract Law", Public Law and Legal Theory Working Paper Series, No. 680 (2018).

This Working Paper is brought to you for free and open access by the Working Papers at Chicago Unbound. It has been accepted for inclusion in Public Law and Legal Theory Working Papers by an authorized administrator of Chicago Unbound. For more information, please contact unbound@law.uchicago.edu.

Personalizing Mandatory Rules in Contract Law

Omri Ben-Shahar[†] & Ariel Porat^{††}

Mandatory rules provide people protections they might otherwise fail to secure in their contracts. Because people vary in the degree of protection they need and the cost of protection they can afford, one-size-fits-all rules are too weak for some and too strong for others. This Essay examines the case for personalized mandatory protections. With the increasing availability of information about consumers, the law may soon be able to tailor mandatory protections that vary with each individual's characteristics. We show that personalized protections increase the overall contractual surplus and prompt more people to enter into contracts. It eliminates cross-subsidies within a class of contractors, but mostly in a way that benefits the class. Separately, we examine the case for price personalization reflecting the varying protections people receive. Lastly, the analysis identifies potential distortions, pitfalls, and practical problems arising from personalized mandatory rules and prices, and discusses the fairness of this regime.

INTRODUCTION

Mandatory rules in contract law are meant to protect people from “bad” terms. Sometimes, bad terms creep into contracts because people don’t notice or understand them, or fail to predict the terms’ true bite. Other times, bad terms are knowingly agreed upon because people can’t afford better ones. By now, it is widely accepted that, especially in transactions involving unsophisticated parties, not everything should be left to “freedom of contract”—that some basic protections should be nondisclaimable.¹

[†] Leo and Eileen Herzel Professor of Law, The University of Chicago.

^{††} Alain Poher Professor of Law at Tel Aviv University and Fischel-Neil Distinguished Visiting Professor of Law at The University of Chicago.

We thank Oren Bar-Gill and participants in The University of Chicago Law Review Symposium on Personalized Law for their comments, and Tal Abuloff and Tom Zur for excellent research assistance.

¹ See Oren Bar-Gill, *Seduction by Contract: Law, Economics, and Psychology in Consumer Markets* 26–44 (Oxford 2012).

Mandatory rules are the most effective, but also the riskiest, regulatory technique in consumer protection.² They are effective because they guarantee a minimum bundle of rights that cannot be circumvented. But they are risky because they could have unintended consequences—raise prices, shrink markets, or impose regressive cross-subsidies.³ Thus, at the forefront of protective law, the question is how to design mandates that deliver the desired upside without imposing the undesired downside.

This Essay proposes a novel solution to the design of contractual mandatory rules: *personalization*. Instead of one-size-fits-all protective mandates, the law would tailor the protection to the personal attributes of each protected party. Similar to the method through which other services, such as insurance, education, medicine, and marketing, are personalized—these firms use big data to tailor their product to the predicted personal needs of each client—the service of legal protection could be personalized to correspond to the predicted protective needs of contracting parties. We argue that, if done properly, personalization could increase the benefits and reduce the unintended costs of mandatory law. Protective needs would be better addressed, and more consumers would be served.

Consider the following example. In recent years it has become popular to enact mandatory rights to withdraw from certain types of consumer contracts.⁴ Based on the (sometimes correct) premise that consumers may enter transactions they later regret in haste

² See Oren Bar-Gill and Omri Ben-Shahar, *Regulatory Techniques in Consumer Protection: A Critique of European Consumer Contract Law*, 50 *Common Mkt L Rev* 109, 111–15 (2013) (discussing the problems with mandatory proconsumer arrangements).

³ See Ariel Porat and Lior Jacob Strahilevitz, *Personalizing Default Rules and Disclosure with Big Data*, 112 *Mich L Rev* 1417, 1453–54 (2014) (discussing the effects of personalization when consumer rights are default rules); Omri Ben-Shahar and Eric A. Posner, *The Right to Withdraw in Contract Law*, 40 *J Legal Stud* 115, 127–28, 144–45 (2011) (suggesting that a mandatory return policy could potentially lead to cross-subsidies among consumers).

⁴ See Jan M. Smits, *Rethinking the Usefulness of Mandatory Rights of Withdrawal in Consumer Contract Law: The Right to Change Your Mind?*, 29 *Penn St Intl L Rev* 671, 671 (2011) (“Both in Europe and the United States, withdrawal rights are increasingly part of mandatory legislation to protect consumers.”); Shirly Levy, *The Illusory Promise of Money Back Guarantees: Comparative Research, Economic and Behavioral Analysis & A Reform Proposal* *15–16 (unpublished PhD dissertation, Tel-Aviv University, Nov 2015) (on file with authors) (describing US and European laws on this matter). See also Directive 2011/83 of the European Parliament and of the Council of 25 October 2011 on Consumer Rights, 2011 OJ L64, § 19 (Nov 11, 2011) (“[T]he consumer should have a right of withdrawal unless he has consented to the beginning of the performance of the contract during the withdrawal period and has acknowledged that he will consequently lose the right to withdraw from the contract.”).

or through misjudgment, a mandatory right to withdraw grants consumers the opportunity to cancel the deal and receive their money back. Some laws provide, for example, seventy-two-hour cooling off periods;⁵ others guarantee a longer period of time.⁶

But all existing mandates share one universal property: they apply uniformly. The same withdrawal period is afforded to every consumer regardless of her true need for that protection. A personalized protection regime would change that. Some consumers need longer periods to reevaluate the deal; others can do with shorter. A seventy-two-hour right to withdraw from a loan contract may be useless to the weakest of consumers, who are often the neediest and are also the recipients of the most risky and complicated loan deals. They need more time to overcome the moment-of-purchase confusion. And conversely, a two-week right to withdraw from online sales may be more than necessary for experienced internet shoppers, and surely too long for “returnaholics,” who purchase with the intent to withdraw.⁷ A uniform duration may be set at the correct “average” length, but it misfires in individual cases (and, as we show, forces some consumers out of the market). The protective goals of the law would be better served by personalized mandatory rules.⁸

This Essay develops the general theoretical case for personalized mandatory rules, focusing on consumer transactions. The basic justification is economic and has both efficiency and redistributive aspects. Personalized protections increase the contractual surplus because they correspond more accurately to the market failure they seek to repair. Strengthening the protection for those who need more—and dimming it for those who need less—would often increase the surplus enjoyed by both groups, bringing more consumers into the market.⁹ Personalized protections also affect redistributive goals because they eliminate cross-subsidies

⁵ See, for example, Federal Trade Commission, Rule concerning Cooling-Off Period for Sales Made at Homes or at Certain Other Locations, 16 CFR § 429.1(a) (2015) (requiring that a buyer who is engaged in a “door-to-door” sale have a right to cancel the sales contract within three business days of the transaction).

⁶ See, for example, the Canadian Consumer Protection Act: CPA Direct Agreements Rule, § 43(1) (2002) (granting a ten-day cooling-off period on door-to-door sales).

⁷ See Kristin Colella, *Returnaholics, Beware: You Could Get Blacklisted by Your Favorite Stores* (The Street, Mar 16, 2015), archived at <http://perma.cc/T4YW-3F4Q>.

⁸ See Porat and Strahilevitz, 112 Mich L Rev at 1453–54 (cited in note 3) (discussing personalization of a default rule for the right to withdraw).

⁹ We also consider the possibility that those who need the protection more impose such high costs on sellers that they should receive a low level of protection. See the numerical example in Part I.

occurring in equal-treatment pools. When the cross-subsidy is regressive, its elimination is fair. And while this Essay does not develop a full account of the moral implications of mandatory protections, it shows how personalization could also promote the non-economic goals of such mandates, such as dignity and justice.¹⁰

In studying the effect of personalized mandatory law, this Essay distinguishes two dimensions of personalization: protection and price. Personalized protections could be established by law. Personalized prices, in contrast, could be set by firms to reflect the value or cost of the protection. The law determines whether such price discrimination is permitted. A fully personalized regime is one in which both the protection and the price vary across consumers. We examine the advantages of such a regime and compare it to regimes that allow personalization along only one dimension or none at all.

It is beyond the scope of this Essay to consider the manifold issues implicated by such a radical shift in the approach to mandatory rules. Many issues related to implementation—what data could be used, how to build the personalization algorithm, how to protect people’s privacy, and more¹¹—are too important to treat casually in the limited space we have here. We nevertheless discuss several critical incentive problems: Could personalization survive arbitrage? Would it undermine incentives for self-protection and self-improvement? We show why many intuitive concerns are misguided. Personalization of mandatory consumer laws, we conclude, should be taken seriously.

The focus of this Essay is on mandatory rules in contract law aimed at protecting consumers. But the analysis offers a benchmark for studying personalization of other mandatory rules in contract law: Should the age of legal capacity to enter into contract, which is currently uniform, vary across individuals based on their maturity? Should rules of inalienability—again, currently uniform—apply differently across people, allowing some to sell or buy assets that others may not? Should the statute

¹⁰ See Part III.C.

¹¹ Some of these issues were previously discussed in Porat and Strahilevitz, 112 Mich L Rev at 1433–53 (cited in note 3); Omri Ben-Shahar and Ariel Porat, *Personalizing Negligence Law*, 91 NYU L Rev 627, 676–86 (2016); Anthony J. Casey and Anthony Niblett, *The Death of Rules and Standards*, 92 Ind L J 1401, 1423–45 (2017). Other issues are raised in other contributions to this Symposium. See, for example, Niva Elkin-Koren and Michal S. Gal, *The Chilling Effect of Governance-by-Data on Data Markets*, 86 U Chi L Rev 401, 401–01 (2019).

of frauds be personalized? We leave such expanded inquiry for future research.

The Essay is organized as follows: Part I presents a theoretical framework to identify the effects of personalized mandatory rules and compares different possible personalization regimes. Part II discusses various incentive problems that could befall personalized law. Part III then discusses applications of the theory, demonstrating how personalized rules would work in various contexts of protective law. Finally, the Conclusion points to possible future research.

I. ANALYSIS

A. Framework of Analysis

Consider a market in which each consumer may purchase one unit of a product. The value of the product depends on a feature that we refer to as “legal protection.” For example, the value may depend on the warranty or the right to withdraw—each of which may be mandated by law to afford protection to the consumer.

A contract between the seller and a consumer consists of a protection level (mandated by the law) and a price. It is assumed that the seller is operating in a competitive environment and thus charges a price exactly equal to its costs of providing the protection.

The legal mandate may be set at “No Protection,” “Low Protection,” or “High Protection” levels. The mandates may be either *uniform*, which means all consumers must receive that same level of protection, or *personalized*, which means that the level of protection may vary across consumer types. Mandating a level of protection means that the seller may not offer a product with *lower* protection (but it may offer a product with higher protection).

Consumers are assumed to vary along two dimensions: the *value* they assign to the legal protection and the *cost* to the seller of granting them protection.

The first variation—in the value but not in the cost of the protection—occurs when the protection is fitted into the product and the only cost is its installation. This is the case, for example, with mandates to fit a product with a safety device (mandatory airbags in a car¹²) or mandates to comply with minimum quality

¹² See, for example, 49 USC § 30127(h) (stating that government cars must be equipped with inflatable restraints).

standards (warranty of habitability in lease contracts¹³). While consumers value the protection differently, the costs to the seller are uniform across consumers.

The second variation—in cost—occurs when the mandated protection is a legal right that needs to be invoked by a consumer and, thus, may be utilized differently by different consumers, imposing a cost that depends on the consumer’s propensity to utilize that right. This is the case, for example, with mandatory remedial provisions (a right to cancel the contract¹⁴ or to seek statutory damages¹⁵) or mandatory prohibitions (like the prohibition against collection of personal data,¹⁶ which imposes a cost on the seller equal to the value of the information that would otherwise be collected).

Consider the following example involving two types of consumers, labeled A and B. Assume that, in the absence of protection, both receive a net positive benefit of \$1 from product usage (the value of the product to the consumer minus the price). In addition, the legal protection, which is costly for the seller to provide, has a different value and cost for each consumer:

TABLE 1: PROTECTION LEVEL AND PRICE

Type A				Type B			
Level	Value	Cost	Net	Level	Value	Cost	Net
No	0	0	0*	No	0	0	0
Low	8	10	-2	Low	6	2	4
High	12	20	-8	High	10	4	6*

Type A consumer values any level of protection more than Type B does. But Type A also imposes a higher cost on the seller at any level of protection. We chose an example in which the optimal personalized level of protection (marked with *) varies across consumer types: for Type A it is No Protection, and for

¹³ See, for example, Fla Stat Ann § 83.51 (requiring landlords to comply with statutory minimum standards).

¹⁴ See Ben-Shahar and Posner, 40 *J Legal Stud* at 118–21 (cited in note 3).

¹⁵ See, for example, 17 USC § 504(c)(1) (allowing copyright owners to elect statutory damages “in a sum of not less than \$750 or more than \$30,000 as the court considers just”).

¹⁶ See, for example, Fla Stat Ann § 540.08 (prohibiting unauthorized publication of a person’s name, portrait, photograph, or other likeness for any commercial or advertising purpose); Ky Rev Stat Ann § 391.170 (protecting property rights in a person’s name or likeness from commercial exploitation).

Type B it is High Protection. None of our results change if the individually optimal levels lie in the midrange.

To illustrate, Type A is a consumer who values a right to withdraw more, perhaps because she makes more rash purchases or purchases products of higher value. Type A also imposes a greater cost on the seller by withdrawing more often or by returning the product in worse shape.

In the benchmark analysis, we focus on the criterion of maximizing the value of the contract. Under a constraint of *uniform protection* across consumers, the optimal level is Low Protection (assuming equal numbers of Type A and Type B consumers). It provides a total surplus of \$2, which is greater than \$0 for No Protection or -\$2 for High Protection. The example was constructed to illustrate this common scenario: the optimal level of protection for each consumer may vary along a range, while the optimal uniform protection is somewhere in the middle.¹⁷ It is only when such variation exists that personalization of the protection is relevant.

To examine consumers' welfare, we assume that sellers operate in competitive markets and thus the price exactly reflects the cost of protection. Further, we focus the analysis in this Part (unless noted otherwise) on the behavior of consumers who know what level of protection they receive and correctly anticipate its value. It is tempting to think that such knowledge by consumers defies the reasons for mandating the protection—informed consumers can demand it on their own. But mandates exist even when consumers appreciate their value. For example, a protection might be granted to all consumers because some are uninformed. In such cases, informed consumers piggyback on the protective mandate.¹⁸ Once a mandatory protection is granted, informed consumers could not be treated separately.

B. Personalized versus Uniform Law

In this Section, we examine consumer welfare under four possible legal regimes created by a pair of binary legal choices. The

¹⁷ The optimal uniform protection could be no protection at all because allowing any level of protection uniformly to all buyers might be prohibitively costly (and inefficient). With personalization, however, it might be efficient in such a case to give some positive level of protection to some buyers who ascribe to the protection a positive net value.

¹⁸ If all consumers are informed, it is questionable whether mandatory protection is needed unless a progressive distribution is the main goal of the law in granting the protection. See Part II.D.

first legal choice is whether to mandate a uniform or a personalized protection. The second legal choice is whether to allow personalized prices (reflecting the cost of the personalized protections) or to require uniform prices. Thus, the four regimes are:

1. Uniform Protection and Uniform Price
2. Uniform Protection and Personalized Price
3. Personalized Protection and Uniform Price
4. Personalized Protection and Personalized Price

1. Uniform Protection, Uniform Price.

Consider a legal mandate to provide the socially optimal uniform level of protection, which in the example is Low Protection, along with a prohibition against price discrimination. For the seller, the cost to provide this protection is \$10 for Type A and \$2 for Type B, on average \$6. At this price for the protection, both Type A and Type B will purchase the product (A's value for the protection is \$8, B's value is \$6, and both receive a benefit of \$1 from usage independent of the protection).

Several key effects of Regime 1 are illustrated by this scenario:

First, Type A consumer is cross-subsidized by Type B (this is true regardless of whether consumers are informed or not). This cross-subsidy is a common artifact of uniform protective laws with uniform prices: those who value the protection more are gaining at the expense of those who value it less.¹⁹ There are important distributive implications to such cross-subsidies, and they would be particularly disturbing if the direction of the transfer is regressive.²⁰ In addition, due to the cross-subsidy, inefficient purchase decisions might be made (here we refer primarily to informed consumers). In particular, Type A's consumption is inefficient: left to pay for the true cost that it imposes on a seller providing Low Protection (\$10), Type A would decline the transaction because the value from the transaction is only \$9 (\$8 from the protection plus \$1 from usage). But because some of the cost is now borne by the Type B consumer, Type A consumer would happily take the windfall. Note that, in this example with No Protection, Type A

¹⁹ See Omri Ben-Shahar, *The Paradox of Access Justice, and Its Application to Mandatory Arbitration*, 83 U Chi L Rev 1755, 1763–67 (2016).

²⁰ See Part II.D. In this context, a regressive transfer would distribute value from low-income consumers to high-income consumers.

consumer would buy the product (usage benefit of \$1), so her decision to buy, even with a cross-subsidy, turns out to be efficient. But this is not always so. If the usage benefit of the deal for Type A consumer (with No Protection) were negative, say $-\$1$, she would not enter into it without the cross-subsidy.

Second, Type B's consumption may also be inefficient. In the example, the price charged by the seller for the protection is equal to Type B's value for the protection, which leaves the Type B consumer with a benefit of \$1 from the transaction. But the example can easily be expanded to a scenario in which the price for the protection exceeds that value by more than \$1. Then, the cost of the protection—in particular, the cross-subsidy implicit in the price—would be “crushing” to Type B consumer, who would inefficiently exit the market. This unraveling is particularly unfortunate because, with No Protection, Type B would make the deal for a positive welfare of \$1. Moreover, if Type B exits, the seller could no longer afford to charge a price reflecting the average cost across A and B. With only Type A in the market, the seller would have to raise the price to reflect the cost of providing Low Protection to Type A. At that price, Type A consumers will also exit the market (they pay \$10 for the protection but receive a benefit of \$8 from the protection and \$1 from usage).

These effects are shown under the assumption that the legal mandate is set at the socially optimal uniform level of protection. The law could instead set the uniform protection at a different level, focusing perhaps on the interests of one type of consumer. That might, depending on the values, increase welfare and avoid some of the unraveling. But the flavor of the results above remains, and it is an artifact of a regime that treats different types of consumers uniformly.

In general, the direction of the effects the numerical example illustrates are typical of a Uniform Protection, Uniform Price regime: many consumers receive an inefficient level of protection, which reduces their overall surplus from the transaction and—having to pay for inefficient protection—reduces their propensity to enter into the contract. Some of those consumers would have preferred to waive some of the protection; others want to pay for more protection. At the same time, there are consumers who are cross-subsidized under the Uniform Protection, Uniform Price regime; their surplus from the deal, as well as their propensity to enter into contracts, inefficiently increase. As a result, some unraveling is likely.

2. Uniform Protection, Personalized Price.

Consider now a legal mandate to provide the socially optimal uniform level of protection, which in the numerical example is Low Protection, but allowing the seller to price discriminate. The seller would charge each consumer a price reflecting the seller's cost of providing that protection, \$10 for Type A and \$2 for Type B. Only Type B would purchase the product.

In fact, a uniform protection regime with personalized prices could potentially yield greater welfare if the mandated protection is different than the optimal uniform level. If, in the example, the uniform mandate were High Protection, again the Type A consumer would avoid the transaction entirely because she values the protection at \$12 and yet is asked to pay \$20. But now, the net welfare to the remaining consumer, Type B, would increase to \$6. Thus, a uniform protection regime that anticipates the unraveling should set the level of protection that is optimal *for those consumers who remain in the market*.

Several key effects of Regime 2 are illustrated by this scenario. First, while there is no longer any cross-subsidy, a uniform level of protection could push some consumers out of the market—those who prefer not to bear the cost of the protection. Second, this regime imposes a loss on some consumers who receive a positive net payoff and remain in the market—but who are saddled with a protection level that is different than their personally optimal one.

3. Personalized Protection, Uniform Price.

We now turn to examine personalized mandatory protection. Consider first a legal mandate to provide each consumer her personally optimal level of protection but prohibiting variation in prices. Assume that the personalized mandates are set at the efficient level: No Protection for Type A and High Protection for Type B.

Having to charge a uniform price (and assuming, still, equal numbers of Type A and Type B consumers in the market), the seller would like to charge a price of \$2 for the protection (an average of \$0 and \$4, the cost of such protections). At this price, however, the Type A consumer would not enter the transaction because the value of No Protection is \$0, and her usage benefit is only \$1. With Type A out, the seller would have to charge a price of \$4 for the protection. The pooling of price causes an inefficiency

in the form of partial unraveling, whereby Type A consumers do not enter these transactions and forgo the \$1 usage benefit.

In some settings, the degree of unraveling can be reduced by adjusting the personalized protection. If, in the example, the personalized protection for Type B were set at Low Protection (lower than the socially optimal personalized level), the uniform price of the protection would be reduced to \$1 (average of \$0 and \$2), and Type A would not exit the market. In the original numerical example, such adjustment reduces overall welfare, but in other cases welfare might increase.

In general, the uniform price mandate distorts the market outcome. The cross-subsidy it embodies reduces the propensity of some consumers to enter the contract. They will enter the transaction less often than optimal. At the same time, it increases the propensity of others to enter and might lead to excessive and inefficient contracting. This distortion can be reduced by shifting away from the socially optimal personalized protection for some consumers, but such deviation produces a new form of loss.

4. Personalized Protection, Personalized Price.

Finally, consider a fully personalized law: a legal mandate that provides each consumer her personally optimal level of protection and allows the seller to charge each consumer a different price. In our example, Type A consumer receives No Protection and pays \$0 for it. Type B consumer receives High Protection and pays \$4 for it. Each type enjoys a positive payoff (which, by construction of the regime, is the maximal payoff they can attain in the market). The result is maximization of the consumer surplus. This is the result that would occur with no legal mandate in a well-functioning market (informed consumers, perfect competition, and segmentation of consumers): each consumer would receive the individually optimal quality. There is no cross-subsidy, and thus the incentive to contract is optimal.

II. EXTENSIONS

The previous Part demonstrated that personalized contractual protections and prices can increase the total value of the contracts. Some consumers might lose from personalization—those who receive a cross-subsidy under a uniform regime—but the gain to others generally exceeds such loss. More consumers enter contracts and enjoy well-matched protections, and overall welfare

increases. This is not surprising: one-size-fits-all treatments usually squander the advantages of tailored treatments, and we have shown that uniform prices cause unraveling.²¹

It is common and uncontroversial for sellers to personalize many product features, such as storage capacity of smartphones or amenities in a hotel. It is also common and uncontroversial to then personalize the prices of products containing varying features. These practices of personalized features with corresponding prices also extend to voluntary protections offered by sellers, such as extended warranties by stores or expanded rights to withdraw from transactions by airlines.²² At the same time, it is currently widely uncommon for the mandatory legal features to be personalized in terms of scope and price.

The question we pose is: Why? What might explain the wide embrace of some types of personalization (features and voluntary protections) and not others (mandatory protections)? In this Part, we examine several possible objections to personalized mandatory protections and prices.

A. Arbitrage

If different consumers receive different protections or prices, arbitrage may take place: consumers of one type will buy in order to resell to consumers of another type. Those who get higher prices, or less protection, or a worse combination of the two, would purchase not from sellers but from other consumers who receive better terms.

Arbitrage might occur under Regime 2 (Uniform Protection, Personalized Price) because Type A consumer, who is charged a higher price for the same protection, would buy instead from Type B and get the legal protection at a lower price. It might occur under Regime 3 (Personalized Protection, Uniform Price) because the Type A consumer, who is charged the same price for less protection, would again buy from Type B and get more protection for the same price. And arbitrage might occur under Regime 4 (Personalized Protection, Personalized Price) because the Type A consumer would prefer the combination of price and protection that Type B receives and, again, buy through Type B. Under

²¹ See Parts I.B.1 and I.B.3.

²² See Ben-Shahar and Posner, 40 *J Legal Stud* at 134 (cited in note 3) (describing the relationship between airline ticket prices and protections of the ticket holder's right to withdraw).

Regime 1 (Uniform Protection, Uniform Price), arbitrage is not an issue because all consumers receive the same deal.

Thus, arbitrage may undermine personalization unless the law finds ways to prevent it. Arbitrage could be prevented if the personalized protection is attached not to the product (in rem) but exclusively to the consumer who purchased it (in personam). For example, if a consumer purchases a computer and has an extensive personalized right to withdraw, then to avoid arbitrage, a seller may require that the original purchaser must be present to withdraw (that, too, can be circumvented); or, more effectively, the seller might sell computers that require personalized access codes or other forms of identity verification.²³ In general, by structuring the transaction not as a one-off sale of a discrete good but as an ongoing service of access to the product, sellers may eliminate arbitrage.²⁴ Techniques currently used to prevent resale of “licensed” digital products, including contractual prohibitions against such transfers, would also be effective in stopping arbitrage.²⁵

B. Moral Hazard

Consider now how the different legal regimes affect the behavior of consumers in the transactions and, specifically, their decisions to utilize the protection. We consider both static and dynamic effects. At the static level, a legal protection is a form of safety cushion, which could create a standard moral hazard problem: when consumers don't bear the cost imposed on sellers, they overuse the protection. At the dynamic level, consumers' behavior may be affected by the desire to impact future prices and protection levels. (Think of an insurance policyholder who exercises

²³ For example, the International Student Identity Card (ISIC) provides a variety of discounts for students. The student card can also be used as an identification card, as it has a picture of the cardholder and some identifying information. In that way, the seller can be sure that the student is the rightful owner of the card, and only cardholders may enjoy the card's benefits. See *About Us* (ISIC Association), archived at <http://perma.cc/GT7S-GHZB>.

²⁴ Limiting the number of items that one consumer can purchase, as sometimes happens, might also be motivated by the desire of the seller to reduce the risk of arbitrage. See Jamie Robertson, *Why Some Firms Limit How Much You Can Buy* (BBC News, Jan 14, 2016), archived at <http://perma.cc/9Y59-4FSG>.

²⁵ See Aaron Perzanowski and Chris Jay Hoofnagle, *What We Buy When We Buy Now*, 165 U Pa L Rev 315, 327–29 (2017) (detailing how such preventive contractual mechanisms work in the digital media industry).

more care so as to avoid a loss that, while fully covered by the insurance policy, would increase her future insurance premiums).

Under Regime 1 (Uniform Protection, Uniform Price), the standard static moral hazard problem of overutilization arises: the consumer externalizes the costs of the protection to the seller and uses the protection too often. A consumer who receives, for example, a right to withdraw would not be careful enough in her purchases; and any time she can get even a minor benefit from withdrawing, she would not think twice before doing so. There is no dynamic effect that would otherwise offset such overuse because the terms the consumer will receive in the future do not depend on the overuse.²⁶

A behavioral distortion might arise under Regime 3 (Personalized Protection, Uniform Price). Again, the static problem of moral hazard occurs because the consumer has nothing to lose by overutilization of the protection—the price does not adjust. But now there is also a dynamic effect, and it could either aggravate or mitigate the static overuse problem. If high utilization leads to adjustment of the personalized protection level upward, the consumer would have an even greater incentive to overuse. But high utilization also increases sellers' costs, and that could lead the law to set a lower, rather than higher, level of protection. In such cases, the dynamic effect would restrain a consumer's static incentives to overuse the protection.

Importantly, the data that can be inferred from observed behavior about consumers' valuations is biased: it reflects the distortions created by the legal regime rather than true inherent values, and a personalization algorithm has to be trained to discount such information in calculating optimal personalized levels of protection. We view this as an additional cost of uniform price regimes: producing unreliable information that reflects distorted behavior.

Under Regimes 2 and 4, which involve personalized prices, no static moral hazard arises because of the dynamic effects of personalization. In particular, the consumer knows that her actual behavior would affect the price she would pay in future transactions, and this would restrain her incentives to overutilize the protection. And as long as the price accurately reflects the cost

²⁶ However, the uniform price would increase because many consumers would overuse the protection. This potential increase of the price, however, would not affect the individual consumer's behavior because that behavior would have only a negligible effect on the price.

imposed on the seller, the consumer would behave optimally. Still, Regime 4 is superior to Regime 2 because the Personalized Protection, Personalized Price regime gives the consumer the dynamic incentive to use the protection in a way that would adjust the protection toward her personally optimal level.

This discussion suggests that full personalization is desirable for prompting not only optimal protection from sellers but also good behavior by consumers. This should not be a surprise. Moral hazard problems are generally mitigated by long-term payoff structures that punish agents for poor behavior.²⁷ Still, this analysis has important ramifications for personalized regimes: their design should *not* be based mainly on consumers' past behavior under a different regime. If the law were to transition, for example, from Regime 1 to Regime 4, consumers' past behavior should not be a crucial factor in setting the personalized levels.

The behavior of sellers is also shaped by the prevailing legal regime. Sellers can engage in various *ex ante* expenditures to reduce the cost of complying with the mandated protection (other than avoiding the deal altogether). They may target some populations over others²⁸ or design transactions to reduce the cost of the mandated protections.²⁹ When consumers tend to overutilize the protection (as we argue would happen under the uniform price Regime 1 and sometimes also under Regime 3), the seller would have added incentives to reduce that cost. To illustrate, if consumers overuse a right to withdraw, the seller would engage in broader disclosure or engage in less remote selling to reduce the buyers' rate of withdrawal. While the same concern drives the seller under Regime 4, it is attenuated: the buyer is disciplined by the personalized prices.

²⁷ See Robert Gibbons and Kevin J. Murphy, *Optimal Incentive Contracts in the Presence of Career Concerns: Theory and Evidence*, 100 *J Polit Econ* 468, 498 (1992); Bengt Holmström, *Managerial Incentive Problems: A Dynamic Perspective*, 66 *Rev Econ Stud* 169, 170–77 (1999).

²⁸ See George L. Priest, *A Theory of the Consumer Product Warranty*, 90 *Yale L J* 1297, 1314–19 (1981) (arguing that manufacturers could exclude warranty coverage for a particular use of a product or specific class of consumers for which the volume or intensity of use is relatively high, for example, by excluding coverage of commercial uses). See also David Gilo and Ariel Porat, *The Hidden Roles of Boilerplate and Standard-Form Contracts: Strategic Imposition of Transaction Costs, Segmentation of Consumers, and Anticompetitive Effects*, 104 *Mich L Rev* 983, 988–93 (2006) (describing techniques that might be used by merchants to screen unwanted consumers out).

²⁹ See Priest, 90 *Yale L J* at 1330 (cited in note 28) (explaining that some warranties for products require consumers to report about a defect in a very short period of time to avoid the risk that the consumer's use added to the damage).

C. Ex Ante Incentives

Consider now a different ex ante aspect—the incentives of consumers to reduce their need for the legal protection.³⁰ Here we consider not the transaction-specific incentive to deploy the protection but the underlying decisions of consumers to alter their “type”—to invest in various skills that would reduce their need for legal protections. To illustrate, if legal protection is granted to consumers because they are ill-informed, uninsured, or poor, consumers might invest less in information, insurance, or work.

Regime 1 (Uniform Protection, Uniform Price) creates no additional incentives for consumers to improve their skills, beyond their basic interest in less need for a legal protection. Regime 2 (Uniform Protection, Personalized Price) provides stronger incentives: a consumer with improved skills requires less protection, which is less costly to the seller and leads to a lower price.

A strong intuition might suggest that personalization of the protection without personalization of prices (Regime 3) would *distort* incentives for self-improvement. If, as a result of making a costly investment in improved skill, a consumer values the legal protection less and receives less of it, the consumer would invest less.³¹ But the reverse could also be true. Better skills may sometimes reduce the cost to the seller, which would justify a higher, rather than lower, level of protection.³² In such cases, buyers would have stronger incentives to improve their skills.

What about sellers’ incentives to reduce their costs under Regime 3? If a seller that invests in reducing its costs of granting the protection is then required to provide higher personalized protection, the seller would invest less. A seller, for example, might be able to invest in technologies that would ensure an effective reuse of returned products that otherwise get thrown out. But if

³⁰ See Ben-Shahar and Porat, 91 NYU L Rev at 660–62 (cited in note 11) (discussing how automobile drivers’ standard of care in accidents impacts pedestrian behavior ex ante).

³¹ Although, it could be that the improved skills would make the consumer more protected in total even if the level of protection granted by the seller decreases. Thus, if higher skills mean a consumer knowing to protect herself from certain risks, she might not benefit much from a strong protection offered by the seller. Thus, the consumer might invest to improve skills, but still not at the efficient level: some of the benefits of the investment are externalized to the seller, who provides lower protection once the consumer’s skills are improved.

³² See the discussion of Regime 3 in Part II.B.

such investment results in an increase in an extended period of withdrawal, the seller would be less likely to invest.³³

This concern with the “deep” ex ante effects of personalized law is valid and important, and we have examined it in depth elsewhere.³⁴ In general, when the law attaches greater protection or grants other benefits to low-skilled individuals, it reduces their incentives to improve. If a doctor who improves her skills is then confronted with higher personalized standards of care (with no increase in the prices she can charge), she would invest less than if no such personalization of liability occurs.³⁵

But this concern is of lesser bite in the context of consumer contracts if the personalized protection is also matched with personalized prices (Regime 4). Now, improved skill could benefit a consumer. If she receives lower personalized protection, she is also charged a correspondingly lower personalized price. If the entire value of her increased skill is internalized to the consumer through the lower price—namely, if the sellers operate in a competitive environment—her investment, as well as the incentives of the seller to reduce the costs of the protection, would be optimal.

D. Distribution

One-size-fits-all rules in contract law are formally “equal” but in fact redistributive. If all consumers get the same right at the same price, those whose protections are more costly for the seller are cross-subsidized by others. The question then is whether the distributive effects are the intended ones (usually the goal is to favor most those who can afford the protections least) and, therefore, whether the effects are desirable from a social perspective. Because many consumer protections are intended to improve the well-being of the weakest consumers, it is crucial to verify that they do not unexpectedly have the opposite effect.

Under Regime 1 (Uniform Protection, Uniform Price) in our example, the winner is Type A consumer and the loser is Type B: the latter pays a price above the seller’s cost to subsidize the former. If the social goal were to maximize contractual surplus, Type A should not get the protection in the first place—the cost

³³ What about the seller’s incentives under Regimes 1 and 2, when the protection is uniform? When prices are uniform (Regime 1), sellers have incentives to reduce the costs of the protection; when prices are personalized (Regime 2), they also have such incentives.

³⁴ See Ben-Shahar and Porat, 91 NYU L Rev at 646–56 (cited in note 11).

³⁵ But she might improve her skills when, even with an elevated standard of care, her costs of care would diminish due to her improved skills. See *id.* at 649.

outweighs the benefit. But if the social goal accounts for distribution, is the cross-subsidy desirable? Type A consumers value the protection most and also cost the seller more. Perhaps this is so because they are less sophisticated and less educated, more prone to make regrettable contracting errors than Type B. They are in greater need for a protection that digs them out from their own mistakes and misfortune. With no protection, Type A consumers would get deals with low surplus (they will not be able to afford high protection) or refrain from entering the deal. The mandate with cross-subsidy helps these consumers at the expense of the more advantaged Type B. Of course, it runs the risk of unraveling—Type B consumers leaving the market—but as long as Type B consumers have high enough value from the deal, such progressive cross-subsidies can be sustained under Regime 1. It is possible, of course, that Type A consumers are the relatively more sophisticated. They know how to deploy the protections better; thus they value the protections more and also cost the seller more. In such a case, the cross-subsidy under Regime 1 is unjust.

Let's turn now to Regime 3 (Personalized Protection, Uniform Price). In this regime, all consumers pay the same price but some are more protected than others. Now, the cross-subsidy reverses: Type A consumers subsidize Type B consumers. The former get no protection (because this is the optimal level given the high cost of providing them protection) but pay the same price for protection as part of this protection regime. If, for the reason above, Type A are a disadvantaged group, the distributive effects of Regime 3 are regressive and hard to justify. In other words, in situations in which disadvantaged groups value the protection more but also cause it to be disproportionately costly, personalized protection without personalized prices may backfire. Of course, the situation could be different: if the optimal personalized protection of the disadvantaged consumers is at a higher level than the one granted to the other consumers, and all pay the same uniform price—as might be the case in many occasions—the distributional effects of Regime 3 would be progressive.

What about Regime 2 (Uniform Protection, Personalized Price)? In this regime, all consumers receive the same protection but pay different prices, based on the seller's expected costs from the utilization of the protection by each consumer. As we explained, some consumers get less protection than what they need, and others get more than what they need, but there is no cross-subsidization. The same is also true about Regime 4 (Personalized

Protection, Personalized Price): no cross-subsidies and, therefore, no redistributive effects.

We conclude, therefore, that personalization could, at times, defy the progressive goals that underlie the protective mandate. If weak consumers are the recipients of a cross-subsidy under a uniform price regime, they could lose it if prices are personalized and might even be priced out. The culprit for this problem is the personalization of *prices*. As long as prices are uniform, the personalization of the protection itself does not necessarily hurt the weakest consumers. On the contrary, if weak consumers are the recipients of higher than average personalized protection, the cross-subsidy embodied in a uniform price would be bolstered.

III. APPLICATIONS

Parts I and II examined the theoretical case for personalized mandatory protections in consumer contracts. We now examine several prominent applications of this approach. There are numerous mandatory commands governing consumer contracts, most of them sector-specific and all potentially subject to personalization. Some mandates are stated as one-size-fits-all, bright-line “rules”—for example, the rule prohibiting insurers from contesting a policy after it has been in force for two years.³⁶ Other mandates are “standards” that receive more flexible, case-specific application but are never fully personalized—for example, the doctrine of unconscionability in contract law.

The goal in this Part is to provide additional insight into the *implementation* of personalized protections.³⁷ We therefore divide the discussion into three Sections. The first two discuss the primary market failures that justify mandatory protections: consumers’ misinformation and irrationality. We argue that mandates justified by such imperfections are ripe for personalization because the magnitude of these problems varies greatly across consumers. Accordingly, each of the first two Sections provides prominent examples of mandates that respond to these two market failures and demonstrates how to personalize them. The third

³⁶ See, for example, Fla Stat Ann § 627.455 (“Every insurance contract shall provide that the policy shall be incontestable after it has been in force during the lifetime of the insured for a period of 2 years from its date of issue.”).

³⁷ We do not enter, however, into the *technologies* of personalization (such as using big data) because those have been discussed in length in previous papers. See Porat and Strahilevitz, 112 Mich L Rev at 1433–53 (cited in note 3); Ben-Shahar and Porat, 91 NYU L Rev at 679–86 (cited in note 11).

Section shifts focus to mandatory protections justified by moral, noneconomic concerns. We ask whether personalization could enhance, rather than frustrate, the moral concerns used to justify the protections.

A. Mandatory Protections Based on Asymmetric Information

One of the primary justifications for mandating consumer protections is the concern that consumers do not have the necessary information to demand such protections voluntarily. It is widely documented that consumers have different degrees of imperfect information and, thus, different needs for the corrective mandates that address such deficiencies.³⁸ It should not be a radical move, then, to vary the mandate according to the gravity of the problem it seeks to solve.

The most straightforward illustration of this protection is personalized mandated disclosure.³⁹ Consumers are protected through disclosure mandates if the information provided improves their decisions. Setting aside the questionable empirical basis of this premise,⁴⁰ disclosure mandates should vary based on how much consumers need, or can use, the information. The regressive cross-subsidy effects arising from uniform disclosure mandates have been demonstrated in many consumer protection areas⁴¹ and could be lessened by personalized mandates.

Another protective mandate grounded in the problem of asymmetric information is mandatory seller liability. Consumers may fail to appreciate the value of such protection and neglect to purchase it on the market. This could justify mandated warranties, sometimes provided by “lemon laws,” which provide a refund

³⁸ See Omri Ben-Shahar and Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U Pa L Rev 647, 704–20 (2011); Richard Craswell, *Static versus Dynamic Disclosures, and How Not to Judge Their Successes or Failure*, 88 Wash L Rev 333, 340–45 (2013) (providing a model of the multidimensional nature of imperfect information in consumer markets).

³⁹ See Porat and Strahilevitz, 112 Mich L Rev at 1470–76 (cited in note 3).

⁴⁰ See Ben-Shahar and Schneider, 159 U Pa L Rev at 665–79 (cited in note 38) (documenting numerous contexts in which mandated disclosure has failed to improve consumer decisions).

⁴¹ See Ben-Shahar, 83 U Chi L Rev at 1779–82 (cited in note 19) (noting some regressive cross-subsidy effects in health care, consumer credit markets, and access justice).

remedy when the goods are chronically defective,⁴² or by mandatory liability for bodily injuries.⁴³ Some consumers do not have the information necessary to appreciate the value of the seller's liability and—if left to bargain for it—would buy too infrequently and too little. While such failures may also result from cognitive misjudgment, they are primarily a problem of misinformation—sellers have an incentive to blur the true need for liability. (Note that problems of misjudgment could cause people to be overly pessimistic and purchase *too much*, rather than *too little*, liability.⁴⁴)

The misinformation problem leading consumers to undervalue the seller's liability afflicts consumers differently. A consumer who adequately anticipates the problems that warranties seek to address can be relieved from (at least some of) the mandatory nature of the seller's liability. No one is born with the knowledge of how to value a warranty, but people learn their needs—only they do so at different rates, based on their varied experience, education, risk aversion, and access to other forms of insurance.⁴⁵ And consumers vary not only with respect to the gravity of their misinformation but also what the missing information implies.⁴⁶ For example, two consumers may be equally and entirely inexperienced and uninformed, but one of them direly needs a warranty because the consequences of an uncovered loss would be devastating to her, whereas the other might not. Personal factors could help define each consumer's need for, and scope of, mandatory seller liability.

As discussed in Part I, tailoring personalized liability would have obvious advantages. First, consumers will get the personally

⁴² See, for example, Mich Comp Laws Ann § 257.1402:

If a new motor vehicle has any defect or condition that impairs the use or value of the new motor vehicle to the consumer or which prevents the new motor vehicle from conforming to the manufacturer's express warranty, the manufacturer or a new motor vehicle dealer of that type of motor vehicle shall repair the defect or condition.

See also, for example, Tex Occupational Code Ann § 2301.603(a) (West 2012) ("A manufacturer, converter, or distributor shall make repairs necessary to conform a new motor vehicle to an applicable manufacturer's, converter's, or distributor's express warranty.").

⁴³ See, for example, UCC § 2-719(3) ("Consequential damages may be limited or excluded unless the limitation or exclusion is unconscionable. Limitation of consequential damages for injury to the person in the case of consumer goods is prima facie unconscionable but limitation of damages where the loss is commercial is not.")

⁴⁴ See Oren Bar-Gill, *Algorithmic Price Discrimination When Demand Is a Function of Both Preferences and (Mis)perceptions*, 86 U Chi L Rev 217–17 (2019) (discussing the connection between consumer misperception and valuation of risks and benefits).

⁴⁵ Bar-Gill, *Seduction by Contract* at 26–32, 214–15 (cited in note 1).

⁴⁶ *Id.* at 27.

optimal, rather than the average, coverage. Second, if coupled with personalized prices, cross-subsidies would be eliminated and consumption would be more efficient (recognizing, however, that cross-subsidization, if progressive, could lead to more contracts). Third, in cases in which the seller's liability relates to bodily injuries or other consequential losses, as a matter of distributive justice, a regressive cross-subsidy embodied in Regime 1 (Uniform Protection, Uniform Price) would be eliminated. This is because a uniform protection regime provides more valuable coverage to high-income consumers: they have higher losses compared to lower income consumers. (Most notably, their expected damages would be higher because their lost income in case of bodily injury is higher.) And if all consumers are paying the same price, the high-income, high-protection group is undercharged.⁴⁷ Personalizing sellers' liability would reduce this regressive effect.⁴⁸

B. Mandatory Rules Based on Consumers' Irrationality

Mandatory protections are often based on consumers' lapses of judgment—mistakes they make that are not due to imperfect information. Consumers are said to “fall prey” to marketing techniques that highlight seductive aspects of the transaction (for example, teaser rates on credit cards).⁴⁹ Or they are prompted by scare tactics and overworry about losses (and then purchase expensive and unnecessary insurance).⁵⁰ Or they get “stuck” in habits and preset defaults, failing to make a minimal rational effort

⁴⁷ See Ben-Shahar, 83 U Chi L Rev at 1782–85 (cited in note 19) (arguing that “mandated compensation can have differential effects across consumers, which can lead to cross-subsidies whereby poor consumers subsidize the compensation of wealthier consumers”); George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 Yale L J 1521, 1546 (1987) (arguing that, when the risk level is related to wealth or income, a uniform premium compels those with less wealth or income to subsidize those with more). But see Ariel Porat, *Misalignments in Tort Law*, 121 Yale L J 82, 97–107 (2011) (discussing the progressive effects of tort law when the standard of care is set uniformly for poor and rich victims, and the regressive effects when level of damages depends on victims' actual lost income).

⁴⁸ See Part II.D.

⁴⁹ See Bar-Gill, *Seduction by Contract* at 113–15 (cited in note 1).

⁵⁰ See Tom Baker and Peter Siegelman, *You Want Insurance with That? Using Behavioral Economics to Protect Consumers from Add-On Insurance Products*, 20 Conn Ins L J 1, 33–36 (2013) (discussing peoples' tendency to pay for “peace of mind to an extent that goes well beyond what expected utility theory would predict). See also Bar-Gill, *Seduction by Contract* at 32–40 (cited in note 1) (identifying that consumers misjudge expected product use). See also Oren Bar-Gill and Franco Ferrari, *Informing Consumers about Themselves*, 3 Erasmus L Rev 93, 109–11 (2010).

to change the status quo and enroll, for example, in programs that provide a net benefit.⁵¹

These afflictions have been widely invoked to justify the design of *default rules*.⁵² The thinking is that consumers could be dug out of their cognitive fallacies by changing the defaults. We think that this idea is naïve, with a long history of failure.⁵³ Default rules are a miserably poor method to protect consumers who make bad judgments because they are too easy for sellers to reverse. Consumers who do not seek the protections on their own are not likely to object to prompts by sellers urging them to disclaim the default protections. The handful of examples for successful “sticky” defaults that protect consumers are the exceptions. Taking consumers’ irrationality seriously should be the basis for designing smart and personalized mandatory—not default—protections.

Consider, for example, mandated limits on credit card teaser rates.⁵⁴ Creditors lure consumers with low short-term prices only to raise them drastically in the long-term. There is evidence that these arrangements take advantage of consumers’ cognitive failures. Creditors correctly expect that borrowers would give disproportionate attention to short-term salient discounts, ultimately getting these borrowers to pay too much down the road for credit.⁵⁵ The intervention for this market failure must be mandatory, or else creditors will easily get consumers to disclaim it. The Credit Card Accountability, Responsibility, and Disclosure Act of 2009⁵⁶ (CARD Act) accordingly prohibited some forms of “behavioral” pricing and teaser rates⁵⁷—but in a one-size-fits-all manner.

⁵¹ See Bar-Gill, *Seduction by Contract* at 231 (cited in note 1); Cass R. Sunstein and Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U Chi L Rev 1159, 1172–73 (2003) (describing the “status quo’ bias”).

⁵² See, for example, Michael S. Barr, Sendhil Mullainathan, and Eldar Shafir, *Behaviorally Informed Regulation*, in Eldar Shafir, ed., *The Behavioral Foundations of Public Policy* 440, 440–46 (Princeton 2012); Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* 4–6 (Yale 2008).

⁵³ See Ben-Shahar and Schneider, 159 U Pa L Rev at 665–72 (cited in note 38); Lauren E. Willis, *When Nudges Fail: Slippery Defaults*, 80 U Chi L Rev 1155, 1174–1208 (2013); Ryan Bubb and Richard H. Pildes, *How Behavioral Economics Trims Its Sails and Why*, 127 Harv L Rev 1593, 1616–32 (2014).

⁵⁴ See, for example, Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (CARD Act), Pub L No 111-24, 123 Stat 1734, codified in various sections of Titles 15 and 16.

⁵⁵ See Oren Bar-Gill and Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 Cornell L Rev 967, 975–77 (2012).

⁵⁶ Pub L No 111-24, 123 Stat 1734, codified in various sections of Titles 15 and 16.

⁵⁷ 15 USC § 1666i-2.

This sweeps away the possible benefits some consumers get from short-term discounts. Teaser rates might serve legitimate purposes: sellers might want consumers to acquire experience with a new product, and low prices for a short period might serve both parties' interests.

Personalized protection could do better. For one, sophisticated consumers should be allowed to enjoy teaser rates because they are careful enough to avoid the back-end high rates (by switching to a different card). Why deny them the flexibility to take advantage of these "loss leaders"? Among less sophisticated consumers, the protection is needed but not uniformly. The one-year freeze required by the law⁵⁸ may be sufficient for some but too low for others. There is ample evidence that finances, charges, and fees charged to borrowers vary greatly across income level and credit score, providing both a justification and a yardstick for personalized limits.⁵⁹

This example is drawn from the area of consumer credit, in which many protections are justified by various types of irrationality. It is also an area ripe for using big data to personalize the legal protections. In fact, personalization is already occurring in the shadow of the law. Credit reporting agencies collect mountains of data on consumers' finances, making it available to creditors to personalize their services. Why should the attributes of the product that are designed by the law be left out of this rich reservoir of information?⁶⁰

C. Morally Motivated Mandatory Rules

Mandatory protections often find their justification not in market failures relating to information or rationality but, instead, in moral convictions that society holds. Those protections often manifest as prohibitions on selling some entitlements people have. Thus, people cannot sell their organs⁶¹ or their right

⁵⁸ 15 USC § 1666i-2 (prohibiting issuers from increasing interest rates in the first year after opening a credit card account).

⁵⁹ See, for example, Sumit Agarwal, et al, *Regulating Consumer Financial Products: Evidence from Credit Cards*, 130 Q J Econ 111, 124–31 (2015) (analyzing the effectiveness of consumer financial regulation with a data set covering 160 million credit card accounts).

⁶⁰ See Porat and Strahilevitz, 112 Mich L Rev at 1440–50 (cited in note 3) (exploring the different areas in which the law could use big data to personalize default rules).

⁶¹ See National Organ Transplant Act of 1984, Pub L No 98-507, 98 Stat 2339, codified at 42 USC §§ 273–74 (2006); Uniform Anatomical Gift Act of 1987 § 10(a).

not to be exposed to highly life-threatening conditions.⁶² Inalienability, in other words, is a type of mandatory protection afforded to all, justified on grounds of dignity, justice, and sometimes efficiency.⁶³

In consumer contracts, some rights are likewise thought to be fundamental. Even if a fully informed and rational consumer would agree to be treated harshly, societal values may deny effect to such consent. People may not waive, for example, the mandatory warranty of habitability in rental contracts⁶⁴ despite the real possibility that such minimum guarantees of dignified living may drive up prices and drive out the poorest tenants.⁶⁵ Likewise, workers may not agree—even after full and meaningful deliberation—to accept less than minimum wage for their labor.

Could such mandates be personalized? This question sounds almost heretical. The essence of such protections is to guarantee everyone in society a minimum basic set of rights. Wouldn't this objective be undermined by personalized protection? True, if personalization involves reducing the protection for some consumers below the minimum tolerable level that comports with societal moral values, the answer would categorically be “no.”

But what about upward personalization? Why not *increase* the protection for some above the minimum tolerable level? A

⁶² See 29 CFR § 1926.20(a)(1) (requiring, in the field of construction, that “no contractor or subcontractor for any part of the contract work shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety”).

⁶³ See Margaret Jane Radin, *Market-Inalienability*, 100 Harv L Rev 1849, 1852–59 (1987) (“[I]nalienability is ascribed to an entitlement, right, or attribute that cannot be voluntarily transferred from one holder to another. Inalienability in these uses may mean nongiveable, nonsalable, or completely nontransferable.”); Guido Calabresi and A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 Harv L Rev 1089, 1111–15 (1972); Ariel Porat and Stephen Sugarman, *Limited Inalienability Rules*, 107 Georgetown L J *8–10 (forthcoming 2019), archived at <http://perma.cc/WNC3-DAQT>.

⁶⁴ See, for example, *Boston Housing Authority v Hemingway*, 293 NE2d 831, 843 (Mass 1973) (providing that an “implied warranty that the premises are fit for human occupation . . . cannot be waived by any provision in the lease or rental agreement”). See also generally Roger A. Cunningham, *The New Implied and Statutory Warranties of Habitability in Residential Leases: From Contract to Status*, 16 Urban L Ann 3 (1979) (arguing that most jurisdictions follow the rule that obligates the landlord to repair all defects irrespective of when they emerge, notwithstanding any agreement to the contrary).

⁶⁵ See *Chicago Board of Realtors, Inc v City of Chicago*, 819 F2d 732, 742 (7th Cir 1987) (Posner concurring) (affirming a Chicago ordinance that mandated certain unwailable protections for tenants while criticizing its effects on the housing supply for low-income individuals).

basic warranty of habitability ought to be provided for all, but a heightened one could also be tailored based on circumstances. Moreover, the guarantee of minimum fair terms is at times controversial because of its unintended effects. Possibly, some tenants lose access to homes when a warranty of habitability is enforced,⁶⁶ some workers lose jobs when workplace mandates are put in place,⁶⁷ and some borrowers lose access to credit when loan agreements are subject to mandates (like usury prohibitions or limitations of creditor levy).⁶⁸ Personalized protections could work to strike a more delicate balance between the protective goals and their unintended effects. Some consumers would receive less protection if the cost of such protection would crush a seller's ability to cater to them. We recognize that such tailoring would have to compromise some of the goals underlying prevailing moral convictions for consumer protections and, thus, should be implemented only when the compromise carries proven benefits.

But personalization could be even more ambitious and work not only on the side of the *benefits*. Interestingly, personalization might also work on the side of the *costs* of such relaxation. Some of the moral arguments that justify the protection differ significantly in their strength from one type of consumers to another.⁶⁹ Reconsider again the warranty of habitability. Imagine a young, healthy law student who can easily afford to live in a decent apartment but prefers to live in a subpar low-rent apartment so as to save money for a tour in Europe after graduation. While the benefits of relaxing the protection are not huge (unless one considers traveling to Europe to be an essential necessity), the "moral" costs of such relaxation are minor. A mandatory right to habitability can be personalized—and in this case reduced—especially if the tenant is granted instead a right to revoke the tenancy at any time with no penalty.⁷⁰

⁶⁶ See *id.*

⁶⁷ See Simon Deakin, Jonas Malmberg, and Prabirjit Sarkar, *How Do Labour Laws Affect Unemployment and the Labour Share of National Income? The Experience of Six OECD Countries, 1970–2010*, 153 *Intl Labour Rev* 1, 3 (2014) (discussing the argument that some labor regulations cause depressed demand from employers).

⁶⁸ See generally Geoffrey Giles, *The Effect of Usury Law on the Credit Marketplace*, 95 *Banking L J* 527 (1978).

⁶⁹ See Porat and Sugarman, 107 *Georgetown L J* at *19–34 (cited in note 63) (discussing six different concerns that justify inalienability rules and the ways in which each of these concerns could be mitigated).

⁷⁰ See *id.* at *11–14 (proposing a rule, which stands between inalienability and alienability rules, according to which holders of entitlements would be able to transfer—or waive—their entitlements but retain the inalienable right to revoke the deal with no penalty).

CONCLUSION

We recognize that too many aspects too important to ignore were left undiscussed. In a way, we wrote only the first half of the article we have in mind—the optimistic half. The second, unwritten portion would have to grind through the numerous difficulties of personalized mandatory rules. For example, we said nothing about technical implementation—an enterprise that would require much more than writing computer code. Deep and troubling questions would have to be resolved in developing a personalization algorithm: how to define the algorithm's objective, how to avoid prohibited discrimination, and how to get the necessary data.⁷¹

We end with two final remarks—about the inevitable and the unwarranted. First, we think that some personalization of mandatory rules in contract law is inevitable. If the law does not personalize the rights, firms will. Return to the introductory example of a consumer right to withdraw. Already, even without legal mandates, most vendors provide such rights to consumers. Amazon gives thirty days to return products, Walmart gives ninety days, and airlines sell rights to withdraw at a premium.⁷² For now, these are uniform attributes each firm grants to all its customers (other than the blacklisted “returnaholics”). But firms are using their large databases to personalize various aspects of the transactions—how long before they begin to offer consumers personalized rights to withdraw based on individual demand, vendor cost, or loyalty incentives?⁷³ Personalization by firms is done to increase profits, not consumer welfare. Law-driven personalization can do better in those cases in which market forces cannot be trusted to protect consumers.

Last, we think that some personalization of mandatory rules is unwarranted. It might be tempting to read this Essay as a proposal for personalizing all mandatory laws, including constitutional rights, criminal prohibitions, or procedural guarantees.

⁷¹ See note 11.

⁷² See, for example, *About Our Returns Policies* (Amazon), archived at <http://perma.cc/4ATM-LY2U>; *Return Policy* (Walmart), archived at <http://perma.cc/XCM9-L5UH>; *Will I Be Charged a Fee to Cancel My Reservation?* (Frontier, Oct 1, 2018), archived at <http://perma.cc/SFF4-29HX>.

⁷³ Indeed, there are early signs that data-driven personalization of rights to return products has begun. See Khadeeja Safdar, *How Your Returns Are Used against You at Best Buy, Other Retailers* (Wall St J, Mar 13, 2018), online at <http://www.wsj.com/articles/how-your-returns-are-used-against-you-at-best-buy-other-retailers-1520933400> (visited Jan 8, 2019) (Perma archive unavailable).

This is not the conclusion our analysis supports. The case for personalizing mandatory rules in contract law is based on the premise that contractual protections respond to real difficulties people encounter *in different magnitudes* in crafting their transactions. Personalizing the protective rules is a way to treat each individual according to her actual needs. Because contracts are a creation of private will, personalized legal intervention does not violate their foundation. If a case for personalizing public law rights is to be made, it will have to be based on a different foundation.