

THE END OF BARGAINING IN THE DIGITAL AGE

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ABSTRACT

Bargaining is a fundamental characteristic of many markets and legal disputes, but it can be a source of inefficiency. Buyers often waste resources by searching for information about past prices, where a seller already holds that information. A second – and novel – source of social loss is that some buyers will avoid otherwise beneficial bargains because they recognize the seller’s advantage in any haggling match, and avoid sellers with negotiable prices. They might also hide information that reveals their willingness to pay. This paper argues for mandated disclosure of past prices, and occasionally settlements, where these have been negotiable. The rule requires uniform or transparent pricing, where uniformity means that customers know that a price offered to them is the same as that offered to others, and transparency refers to the disclosure of past sale, or settlement, prices. The rule is applied to markets where consumers presently haggle with professional sellers, including the sale of medical services to hospital patients, law school merit scholarships offered to prospective students, and legal services sold to non-business clients. We additionally explore its potential in employment relationships, where it might be deployed to reduce male-female pay disparities.

A requirement of uniform or transparent transactions can limit a seller’s ability to price discriminate. There are a few markets in which price discrimination is desirable, sometimes to deliver important goods such as life-saving medicines and clean water. We demonstrate how those markets can be preserved alongside a requirement of transparency. Drawing on a variety of examples, including familiar disclosure rules in contracts, as well as compulsory licensing in copyright and the utmost good faith doctrine in insurance, we show that law is conceptually equipped to address the social loss generated by duplicative search and other inefficiencies, and that pricing disclosure rules can be easily implemented, especially as markets increasingly digitize.

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I. INTRODUCTION

Bargaining can be inefficient as well as costly, and it is outdated. Law can improve efficiency and lower costs by reducing the bargaining power of professional, well-informed parties. One claim is that there should be transparency in consumer transactions and that negotiable prices are often inconsistent with transparency. If consumers can bargain with a seller, they should be armed with knowledge of the prices that emerged from recent, comparable transactions. The argument begins with an observation about asymmetric information and the ability of law to economize on duplicative searches for information. Just as it is sensible for law to require truth-in-labeling, so that buyers need not undertake expensive searches in order to know the ingredients and caloric content of packaged food, or the energy efficiency of an appliance or automobile, law might require disclosures about the prices of completed sales in order to save the resources buyers would expend to discover information already known to a seller.¹ For example, applicants admitted to law schools duplicatively and wastefully search for information about merit scholarships, as they try to strike deals for lower net tuition; a typical law school admissions office has a formidable bargaining advantage compared to these buyers, and this advantage generates duplicative information-gathering rather than efficient price discrimination.

But law schools, as professional sellers of services to consumers, could reveal the net prices agreed upon with other applicants, or matriculants, with specified admission credentials. The same

¹ Economists recognize the waste in search costs by consumers, but no one has come to grips with what this means for law. See generally, George Stigler, *The Economics of Information*, 69 J. POL. ECON. 213 (1961); Peter A. Diamond, *A Model of Price Adjustment*, 3 J. ECON. THEORY 156 (1971); Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561 (1971); Steven C. Salop & Joseph E. Stiglitz, *The Theory of Sales: A Simple Model of Equilibrium Price Dispersion with Identical Agents*, 72 AM. ECON. REV. 1121 (1972); Joseph E. Stiglitz, *Imperfect Information in the Product Market*, in RICHARD SCHMALENSEE & R. WILLIG (EDS.), *HANDBOOK OF INDUSTRIAL ORGANIZATION VOL. 1* 769 (1989).

is true for sellers of new cars and for hospitals that treat patients. The key to law reform in this area is to reduce search costs by requiring or somehow encouraging disclosure – but not where this mandate would discourage innovation or efficient price discrimination.

There is a second benefit to transparent pricing – which is to say more law and less bargaining. Uninformed, inexperienced players are sometimes discouraged from participating in markets because they recognize that professional hagglers will get the better of the deal. Transparent pricing can bring these reticent participants to the market in a way that individual sellers cannot. These discouraged buyers, as we call them, are a source of previously unrecognized inefficiency in many markets. If they are disproportionately female, as some evidence suggests, the problem and the inefficiency are especially compelling. Finally, the more sellers can individualize the bargains they offer, the more buyers will work to hide information from potential sellers. This too is a cost that can be reduced by a requirement that sellers offer uniform prices. Our proposal may seem radical, but the discussion points to areas of law, ranging from tender offers for securities to compulsory copyright licenses, where these insights about bargains, inefficient searches, and price discrimination already seem reflected in existing rules.

Part II introduces the problem of duplicative searching and then that of discouraged buyers. It describes the modern case against bargaining where one side is ill-informed. Part III shows how law can improve upon the unfettered free market with a dramatic transparency requirement that largely solves the problems associated with negotiable prices. Alternatively, sellers can simply offer fixed, or uniform, pricing, so that on a given day a customer knows she is facing the same prices as other customers. Part IV considers the tension between a transparency requirement and efficient price discrimination by sellers. The uniformity-or-transparency proposal is largely limited to consumer transactions, and the discussion identifies the characteristics of markets where the proposed rule ought not apply either because it interferes with efficient price discrimination or interferes with incentives for innovation. Finally, Part V considers the paths by which law and technology might bring about transparent pricing in consumer transactions.

II. WHAT'S WRONG WITH NEGOTIATION?

A. Introduction: Negotiable versus Uniform Prices

Information is available in many markets because sellers provide it and, sometimes, because law requires it. Many sellers, including airlines, voluntarily help potential buyers compare a single seller's offerings; a buyer who is about to pay for a seat on a flight can easily see how switching to a different flight, or even a different seat on the same flight, will save money. The seller reduces buyers' search costs by providing this information, although the pricing strategy itself might be part of a price discrimination scheme, as discussed in Part IV.² For the present, it is

² See *infra* Section IV.A.

useful to set price discrimination – good and bad – aside. Sellers are, in any event, less likely to help buyers compare prices with those offered by competitors, and indeed in some cases they will attempt to block information about competitors’ prices.³ Internet shopping and platforms have, however, reduced transaction costs for buyers, who can more easily gather information than could consumers of yesteryear. In some markets, intermediaries make a business of providing information about multiple sellers, and saving buyers’ search costs. Sellers may facilitate this intermediary’s work, paying for referrals or advertising on its platform, or they may resist, usually by declining to make sales through the intermediary or to pay it for referrals.⁴ At the same time, the internet has also decreased the costs to sellers of gathering information about potential buyers, and it has decreased the cost of experimenting with various forms of price discrimination. There is a kind of software arms race between buyers and professional sellers.⁵ Overall, as the cost of acquiring information has dropped, buyers have been better able to learn about market prices and quality, while sellers have learned more about individual buyers and their willingness to pay.⁶

In some cases, online shopping has also brought on more “haggling,” or back and forth negotiation, though not exactly the haggling of the flea market or *suq*. Sellers can state high initial prices in order to try to capture buyers who are impatient or otherwise disinclined to search.⁷ They know that they can lower prices in the future, or that some buyers will regard the stated prices as

³ See, for example, Amazon’s recent plan to block comparisons done in-store, where free-riding is especially problematic. Consumers who search for comparisons with retailer-provided wifi may be barred access. U.S. Patent No. 9,665,881 (issued May 30, 2017). *See also* Dani Deahl, *Amazon Granted a Patent that Prevents In-store Shoppers from Online Price Checking*, THE VERGE, June 15, 2017, available at <https://www.theverge.com/2017/6/15/15812986/amazon-patent-online-price-checking>.

Sellers do at times offer comparisons when competitors’ prices are higher, but the strategy is risky and thus not common. First, the competitors’ prices might change and the seller is open to accusations of deceptive advertising. Second, when price comparisons are not offered but expected, buyers may reason that they are paying too high a price here at this, suddenly silent, seller. A seller’s promise to match prices is discussed below in Section II.C.1.

⁴ Thus, Expedia enables buyers to compare airline prices and schedules; it earns a commission from sales and profits from buying blocks of tickets at a discount and reselling them at market prices. Southwest Airlines, for one, does not use Expedia as an agent and does not sell discount tickets to third parties like Expedia, relying on its brand name and reputation for low prices. Consumers who search for flights on Expedia alone might miss better options on Southwest, and vice versa.

⁵ In some situations, there is a professional buyer with many dispersed sellers, but the problem is normally symmetrical and our examples will assume a professional seller, rather than buyer. “Professional” can be taken as synonymous with the party engaged in repeat play and better informed.

⁶ For instance, online sellers can collect information about the shopping habits of specific users and respond with tailored coupons and discounts, or simply offer differential pricing. Because online markets are highly competitive, it is unlikely, if not impossible, that these practices would violate the Robinson-Patman Act. *See* *Volvo Trucks N. Am., Inc. v. Reeder-Simco GMC, Inc.*, 546 U.S. 164, 181 (2006) (Robinson-Patman Act should be read “consistently within broader policies of the antitrust laws”). Still, many online retailers are reluctant to discuss their pricing practices for fear of negative publicity. Adam Tanner, *Different Customers, Different Prices, Thanks to Big Data*, FORBES (Apr. 14, 2014), available at <https://www.forbes.com/sites/adamtanner/2014/03/26/different-customers-different-prices-thanks-to-big-data/#626f3b065730>.

⁷ To take the best-known example, Priceline.com is an intermediary that offers hotels, flights, and rental cars. Buyers can compare prices but, more interestingly, they can submit bids and experiment with extremely low offers. An accepted bid finalizes a contract, so a bid is a promise to buy at that price. There is a waiting period before another bid can be made, so that buyers cannot simply start low and, at no cost, reduce bids step by step.

invitations to bargain. In both bricks-and-mortar and online venues, some buyers will return to a site repeatedly, or gather coupons, in anticipation of better deals. In many cases, when a buyer haggles, it becomes *less* likely that the buyer will go elsewhere, inasmuch as it is expensive for the buyer to sink such costs and acquire information about multiple sellers. The tourist who gets out of her car to inquire, or bargain, about a hotel room, has invested in an actual location and must bear additional cost if she departs and continues to search elsewhere. This is a strategic problem rather than one of duplicative costs but it, too, points to costs brought on by haggling. The same is true online when a buyer enters personal information and thus invests in a visited site or seller.

Negotiation seems like a fundamental feature of markets, but there are several reasons to regard a good deal of bargaining activity as inefficient. The first, and most significant, is that buyers often engage in wasteful duplication of effort when they gather information. The second is that willing buyers might decline to participate in the market, or bear extra costs in investigating other sellers, because they perceive that they are inferior hagglers, and at a disadvantage when up against a professional seller. A third is that if buyers perceive that sellers will charge higher prices to buyers they know to be eager, buyers will work to hide their information from sellers. Professional sellers are aware of buyer impatience and search costs, and they can also exploit informed hunches about buyers' perceptions. In face-to-face dealings, buyers may accept offers in order to avoid confrontation, or because they think that etiquette requires a sale once the seller has devoted his time. An experienced retailer might offer tea, but in the long run these kinds of interactions and the expectations they produce can *reduce* market participation as buyers avoid unwanted pressure or unfavorable situations. In turn, sellers do not want to lose these buyers. If they are willing to give up entirely on their bargaining advantage, they can promise uniform pricing – by which we mean a practice that promises buyers that they are obtaining the same price as other buyers of the same good from the same seller. Uniform pricing is essentially a guarantee that there is no room or need to negotiate. Where there is uniform pricing, buyers have no need to hide personal details, and no need to fear that their inferior haggling ability will be costly. Finally, they can often rely on the presence of a few informed buyers to make prices competitive. Transparency regarding recent sales is a second-best solution to all these problems. Especially where goods are not perfectly identical, or where market conditions change, so that uniform pricing is impractical, the buyer might be as satisfied by transparency as by uniformity.⁸

Note that the problems associated with haggling, primarily duplicative search and discouraged buyers, go above and beyond any inequality or redistributive argument in favor of legal intervention. Even wealthy, privileged buyers suffer from the problems identified here.

B. Duplicative Search where Prices are (not Uniform but) Negotiable

In many markets, prices are uniform and competition is intense. There is no retail

⁸ When sellers strategically create non-identical goods and services in order to charge buyers different prices, they engage in “third-degree” price discrimination. ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 414 (8th ed. 2012).

bargaining, and when a seller changes prices, they change for all customers at the same time. When filling an automobile tank with gasoline, for instance, there is little information-gathering and no bargaining. Even though arbitrage is impractical, consumers can count on a small (but sufficient) number of comparison shoppers to keep prices competitive.⁹ Buyers who do search have an especially easy time because online apps, including navigation programs, report gasoline prices at nearby stations. A less energetic buyer, whose habit it is to observe prices at the first gasoline pumps encountered on a given day and then to patronize the next station with better prices, will also do very well.¹⁰ In contrast, unless one finds searching to be very expensive, it would be unwise for the purchaser of an automobile to take the price offered by the second dealer one encountered, even though the good is homogeneous and the discovered price is better than that posted at a prior dealership. Past price information is of little value where there is uniformity, unless the buyer can defer the purchase and has reason to think that past prices help predict future ones, as they might with seasonal goods. Consumers who need gasoline might want to do some research about the prices offered by other sellers, but inasmuch as all the customers at a given gas station on a given day pay the same price, there is no benefit to inquiring about past prices in order to choose among sellers.

Where prices are not uniform, there is either price discrimination among buyers or, simply, room for negotiation.¹¹ The latter characterizes such businesses as automobile dealerships, real estate developers, rug showrooms, and law school admissions offices, where admitted students bargain for merit scholarships. In all four of these cases the buyer negotiates better when she knows the price or prices at which the seller has parted with goods. If prices are uniform, so that everyone pays the same price for a given model automobile, a square foot of an apartment of certain quality, or a seat in an entering class (given test scores and undergraduate grades of x and y), then the buyer has little need to engage in extensive search. The buyer may still want to discover the prices charged by close competitors, but in many cases a buyer can rely on the fact that some other buyers

⁹ Even with imperfect information, a reasonably competitive market allows buyers to benefit from the searching, or comparison shopping, undertaken by a modest number of other shoppers. See Alan Schwartz & Louis L. Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PENN. L. REV. 630 (1979).

¹⁰ See John J. McCall, *The Economics of Information and Optimal Stopping Rules*, 38 J. BUS. 300 (1965) (analyzing the optimal moment for terminating a search when the decisionmaker can accumulate more information but where opportunities, once passed on, cannot be revisited).

¹¹ Sellers might announce non-uniform pricing such as different tuitions for in-state and out-of-state residents. As long as the product is the same for both consumer types, announced non-uniform pricing constitutes transparent price discrimination and reduces search costs.

Note that pricing remains “uniform” when customers face the same prices at the same geographical point of sale. For example, Whole Foods A may charge less for a dozen roses than Whole Foods B. The stores need not offer the same sales or respond to different consumer elasticities in an identical manner. The important thing for search costs is that a consumer who enters the store knows that no one has negotiated a better price there. If Whole Foods charges different prices to different customers at the same point of sale, then it is said to be engaging in price discrimination. Similarly, surge pricing during peak traffic times as seen in markets for utilities, Uber rides, and high- versus low-season vacation packages, allows sellers to announce apparently non-uniform prices even though they are engaging in price discrimination by proxy.

are engaged in comparison shopping, so that the buyer can rely on the market to drive the uniform prices down, much as it does in gasoline stations. A reasonable buyer might search just a bit, or not at all.

In the absence of uniform pricing, the rational buyer will seek out more information about competitors' prices or, what is often easier, information about the sales prices agreed to by other buyers who have dealt recently with the seller under consideration. One problem, or serious inefficiency, associated with negotiable prices is, therefore, that buyers must find out about other prices in order to negotiate, or know whether to accept the first (or any subsequent) price offered to them. Uniform pricing offers the protection of other buyers' comparison shopping efforts; in the absence of uniform pricing, it pays to gather information. Importantly, many buyers are after the same information. Unless there is a cheap method of discovering what other buyers have learned, buyers will engage in duplicative and thus wasteful searches for price information. The duplication is inefficient because the seller (and eventually other buyers) already holds this information and could share it. The seller does not share it voluntarily because he hopes that under-informed buyers will overpay. The likely result is some redistribution in favor of the seller – which is why the seller chooses not to post prices that all customers will pay on a given day – and some wasted resources associated with the duplicative searches. There may be cases where the buyer's efforts will increase utility, as where the buyer simply enjoys shopping or learning about other goods when doing so, but in the overwhelming majority of cases we can be certain that the average buyer prefers more information at lower cost, so long as the information is, like prices, easy to process.¹²

There are a few markets in which law already demands uniform pricing. Where tender offers in corporate law are concerned, the Williams Act insists on an equal-treatment rule for dispersed investors (sellers of shares, in this case). The rule solves a well-known collective action problem among shareholders, to be sure, but it also economizes on search costs and ensures that individual sellers need not engage in separate negotiations.¹³ Some legal systems require uniform pricing for initial public offerings of stock, and this too reduces search costs.¹⁴

Where negotiation is common at present, as in the case of a real estate developer or automobile dealer with one hundred units to sell, a requirement of uniform pricing, and thus an end to negotiation, may seem disruptive, but it need not be. As with securities, the seller could start with a uniform high price and then, if inventories required it, prices could be lowered for all customers until the market cleared. The dealer would become more like the conventional

¹² Put differently, buyers are heterogeneous and some may benefit just where most suffer avoidable costs. When a fundamental right or property interest is not at stake, law normally and sensibly aims to reduce overall costs, or to cater to the majority.

¹³ Securities Exchange Act of 1934, § 14(d)(7), 15 U.S.C. § 78n(d)(7) (1988). The Act has been criticized on grounds that this equal-treatment rule unduly encourages shareholders to tender. For this, and the idea that the Act can be evaded but that small shareholders are unlikely to negotiate on their own, see Richard A. Booth, *The Problem with Federal Tender Offer Law*, 77 CAL. L. REV. 707 (1989).

¹⁴ Other jurisdictions allow auctions in which participants agree to pay what they bid down to the market-clearing price.

department store, where there is no value to bargaining prowess. We do not suggest that law go so far as to require an equal treatment rule; under such a rule, once the market cleared and the units were all sold, money would be returned to buyers who paid anything above the market-clearing price. Buyers who were willing to pay something more than the (eventual) market price, would save search costs and have no need to assess inventories or look for sales.¹⁵ Uniform pricing without an equal treatment rule provides more reason for search but, compared to a market with negotiable prices, it dramatically reduces search costs.

C. Discouraged Buyers

1. Inefficiency when buyers avoid haggling

Haggling is as old as the Bible,¹⁶ and it is a skill that most commercial parties, politicians, and parents develop in order to succeed in their respective roles. It was a necessary skill when households dealt repeatedly with a limited set of necessities, and when many goods were not standardized. In modern times, it is a process that many amateurs seek to avoid, even if it means forgoing bargains, because they recognize that a reluctant or inept participant is sure to pay too high a price in an environment where opening prices are meant to leave room for haggling. Buyers who know they are disinclined or disadvantaged by haggling can look for other venues where they can patronize competitive sellers with nonnegotiable prices. In some markets, it is the talented haggler who must leave the mainstream to exercise her skill. One does not haggle at a typical supermarket, on a stock exchange, or at an Apple store.

Section II.B emphasized the duplicative search costs that are experienced in a world without uniform pricing, and the discussion now turns to a second problem inherent in negotiable prices. The problem, or inefficiency, derives from the fact that the cost of haggling, especially for one who knows that she is an inferior haggler, causes some buyers to spend resources in quest of

¹⁵ This equal treatment rule, or version of a descending-price auction, is more appropriate where bidding and market clearing take place within a short period of time. In a typical department store, prices drop over time not only because some buyers value the item more than others, but also because an item may be worth less late in the season, or when similar products come to market.

It is tempting to rush to the conclusion that uniform pricing is unworkable outside of securities markets and retail stores, because things like used cars and condominiums, for example, are not perfectly homogeneous – and sellers can certainly differentiate them if it is profitable to do so. But even in these markets, uniform pricing with strategically differentiated products will decrease search costs. As discussed in the text, a uniformity-or-transparency rule works to reduce search costs and other inefficiencies; where uniform pricing is unworkable or undesirable, transparent pricing can reduce the inefficiency associated with duplicative information gathering by buyers, so long as transparency is understood to include information about past, comparable transactions. In practice the idea is for most sellers to post prices, make use of discounts or inventory-clearing sales so long as they are available to all, but then also disclose recently negotiated exceptions to these prices.

¹⁶ Abraham haggles with God, bargaining down the number of righteous people required to save Sodom from destruction. He gains the rescue of Lot and his family. Genesis 18:16-33 (Revised English Bible). The word “haggle” (used with respect to price) is at least 400 years old. See *Haggle*, <https://www.merriam-webster.com/dictionary/haggle> (last visited July 12, 2017). It is plausible that ancient exchanges involved offers that were accepted or not, but it is at least as likely that haggling prevailed long before there were nonnegotiable asking prices.

other commercial venues and, at times, simply causes disinclined buyers to avoid markets. An anti-haggler may buy a new car less often than she would otherwise wish to; she may go to CarMax to enjoy uniform pricing when there are other used car dealers much closer to home;¹⁷ and she may even opt for rental housing in order to avoid the haggling associated with buying or renovating a home. It is not simply the distaste for haggling that creates the inefficiencies, because this preference might be offset by another person's haggling pleasure. It is instead the increased costs associated with traveling further and avoiding transactions.¹⁸ Thus, imagine a state in which all price information comes with thirty-minute lags. There might be a few people who enjoy the suspense offered by the lag, but for the most part the information lag reduces market efficiency and causes a drop in the number of mutually beneficial transactions. In this lagged environment, every transaction requires time and effort that could be spent on other activities. This is the world as experienced by disinclined, unskilled hagglers.

It might seem that the inefficiency associated with these discouraged buyers will be solved by self-interested sellers, eager to attract them. But on closer inspection it becomes clear that the haggling problem is caused, rather than solved, by such sellers, as they happily sacrifice some transactions with buyers who do not wish to haggle in return for the extra profit available from haggling. In terms of economic efficiency, the critical factor is that haggling transfers wealth between a seller and his buyers, while each discouraged buyer contributes a net social loss.

Imagine, for example, buyers A through E, willing to pay 12, 10, 8, 7, and 6, respectively, for a good that costs a seller, S, just 5 to produce. Three other buyers, F, G, and H, would each pay 7 for the good, but they fear exploitation, as they are inferior hagglers. They do not want to negotiate, and so will patronize S only if pricing is uniform. Buyers I and J might buy if the good were priced at 4, but they will be priced out of the market regardless of S's strategy, as it is inefficient and unprofitable to sell to these low-valuing buyers a good that costs 5 to make.

If S charges a uniform price of 6 or 7, then eight buyers, including F, G, and H, will gladly purchase the good. If S does not haggle, and seeks to maximize the profit available in his market position, S can sell to these eight at a price of 6, for profit of $48 - 40 = 8$. All buyers who value the good above its cost of production are satisfied, so there is no deadweight loss. But S, as a monopolist, can do better by restricting output. If S prices the good at 7, E will be inefficiently excluded, as E is willing to pay 6 for a good that costs 5 to produce. But with seven sales at 7, S earns $49 - 35 = 14$. This is the familiar decision by a monopolist to restrict output in order to increase profits.¹⁹ Any further restriction is less profitable. For example, at a uniform price of 8, S will sell three units with profit of $24 - 15 = 9$.

S does yet better if he is a good haggler. If he haggles with A through E, writing off the

¹⁷ CarMax, and its fixed pricing policy, is discussed *infra* Section II.C.2.

¹⁸ Cf. Luca Andrelini & Leonardo Felli, *Transaction Costs and the Robustness of the Coase Theorem*, 116 *ECON J.* 223, 223 (2006) (noting that parties who must incur preparation costs prior to a negotiation may be dissuaded from reaching an efficient bargain). Here, buyers may refuse to transact where haggling is required, even when they value the good more than its price, if their disutility from haggling exceeds the consumer surplus.

¹⁹ PINDYCK & RUBINFELD, *supra* note 8 at 369. The example assumes no close competitor, who would undercut S and charge a price closer to the marginal cost, 5.

three who will not patronize a haggler, S can price discriminate and take in as much as 43 with costs of production amounting to 25, for a profit of 18.²⁰ Even if some of these buyers are proficient hagglers themselves, S might nonetheless prefer to haggle. If, for instance, C and E are good hagglers, able to split the available surplus with the seller, then C might haggle to 6.5 (halfway between 8 and 5) and E to 5.5. Note that C and E are better off than where S is a straightforward uniform-pricing monopolist. Even so, S's revenue is $12 + 10 + 6.5 + 7 + 5.5 = 41$, and with costs of 25, this leaves a profit of 16. Haggling redistributes from buyers to sellers, and mostly from the unskilled to the skilled haggler, but it can increase deadweight loss, as consumers who are put off by haggling go unserved. This is the essence of the discouraged-buyer problem.

Conventional economic theory concludes that successful haggling, and other price discrimination tactics, increases efficiency (or has no impact on it), but the novelty here is that haggling is like a tax on some customers, and it can increase inefficiency even as it increases the seller's profit.²¹ A price-discriminating monopolist, as discussed in Part IV, can be more socially efficient than a normal (uniform-price) monopolist, but not necessarily so if haggling is the means of discrimination and it discourages some consumers. The seller will still want to haggle, even at the cost of losing some profitable buyers, but it is often more socially efficient to disallow haggling. In the preceding example, haggling squeezed out three buyers, while a nonhaggling monopolist left just one out in the cold. Note that this social inefficiency we have associated with haggling is present even where S has complete information about F, G, and H's preference for not haggling. Buyers F, G, and H simply exit the market because their preference for no haggling is independent of price; S maximizes profit across all buyers by haggling with A, B, C, D, and E.²²

If haggling imposes a net cost on the economy, we might expect it to be eliminated through competition. Indeed, in the most competitive environments, some sellers appeal to hagglers and some to nonhagglers; for every used car lot with sticker prices and no haggling, there are several where haggling is the norm; most appliance stores negotiate prices, but several do not. But the competitors in these markets are not otherwise identical and, often, markets are too thin to accommodate this variety, or choice between negotiable and uniform prices. Even in the most competitive markets, some goods do not come in multiple colors or sizes, so the absence of choice is unsurprising. This raises the question of whether a single seller could offer both haggling and nonhaggling options. Ideally, S would like to haggle with A through E, and also sell to F, G, and H at a price of 6 or 7. However, public sales to these three buyers will normally make it impossible for S to convince a buyer like A to pay 12, or even a haggler like C to pay 6.5.

²⁰ 43 is the sum of the amounts A through E are willing to pay ($12 + 10 + 8 + 7 + 6 = 43$).

²¹ Haggling is like an excise tax, though of course it is allowed rather than imposed by any government. Buyers can exit the market and escape the tax, but when they do so there is an inefficiency compared to the first-best allocation of resources. If there are markets with few discouraged buyers, the inefficiency problem identified here is small, and might be more than offset by a desirable feature of haggling or simply by the cost of imposing the uniformity-or-transparency rule. See *infra* note 74 and accompanying text. On the other hand, if large groups of consumers are regularly discouraged by haggling, as discussed in Section III.E (citing evidence about gender disparities in negotiation and pay), then a uniformity-or-transparency rule is easily justified and may even be too weak a legal intervention.

²² Even if F, G, and H have interdependent preferences with regard to haggling and price, they may exit simply because they expect the haggler's price to be too high given their inferior haggling abilities.

When prices are nonpublic and buyers can be acoustically separated, an ambitious seller can try to have it both ways, in which case the overall result will be more efficient. A merchant that offers uniform pricing can also offer to match a better price found at a competitor. This hybrid pricing may be a signal of competitive prices or, in some cases, an attempt to attract committed hagglers and perhaps to price discriminate, while offering uniform prices to most consumers. More creatively, an automobile dealer might invite customers who do not want to haggle to name a price after observing the sticker price in the showroom, with the seller promising to accept or reject the offer, and no possibility of further bargaining. Alternatively, the seller could promise to make just one counteroffer.²³ Similarly, a Dean could invite a prospective faculty member to announce a compensation package that she commits to accept if the Dean also agrees. Alternatively, the clever anti-haggling faculty member could ask for a promise that she will always be paid at least as much as the first or second-highest paid person with similar seniority. In both cases the repeat player promises not to haggle, and over time that party might develop a reputation for keeping promises not to haggle, even as it haggles with other buyers. This idea is of game theoretic interest but it is impractical, and will normally force the nonhaggler to engage in additional search. Moreover, in almost all cases it is impossible for the seller to identify these two groups of buyers in advance, and it is also impossible to do better by offering a take-it-or-leave-it contract to all buyers, followed by an announcement of a price to those who accept the no-haggle path, and negotiation with those who did not.²⁴

2. Anti-haggling and economizing on search costs

Some buyers might prefer a private seller to a professional seller, because they would rather buy from – and even haggle with – an amateur than a superior bargainer. An experienced seller of used vehicles, to focus on one example, will have developed skill in reading buyers' expressions and manners. But other buyers will overestimate their own haggling abilities, and sellers who survive and thrive in the market are likely to be those who expertly profit at the expense of these buyers. A buyer who purchases from a neighbor or from an individual who advertises on Craigslist might on average expect to share any bargaining surplus with the equally inexperienced seller. The buyer requires a discount because the warranty is weaker, and a lemon is more likely,²⁵ but the buyer knows that a professional will extract more of the surplus than will an amateur seller. Correspondingly, the buyer may inefficiently inspect the vehicle or take it to a mechanic for

²³ Another alternative is the reverse of normal retail sales; the seller could state no price at all and promise to accept or reject an offer made by each buyer. It is easy to see why this would be unpopular. The party that states a price in this one-time game needs to invest more in order to determine that price, and the seller is the repeat player with more information.

²⁴ S would like to sell a no-haggle experience to some buyers, but the announced price for the good acts as a ceiling for hagglers, unless S can somehow keep each group ignorant of the other's prices, while also preventing arbitrage. The assumptions are too heroic to pursue here.

²⁵ See Charles W. Smithson & Christopher R. Thomas, *Measuring the Cost to Consumers of Product Defects: The Value of "Lemon Insurance"*, 31 J. L. & ECON. 485, (1988).

evaluation, knowing that the nonrepeat seller is unlikely to be held to a high disclosure standard.

The professional's advantage in haggling, rather than in acquiring or simply possessing information about the quality of the vehicle, leads buyers to gather information. They are apt to engage in more comparison shopping and research than they would for other goods in order to arm themselves with information that enables them to recognize decent offers from these sellers of used vehicles. The sellers, in turn, presumably gain more of the surplus when buyers are poorly informed not only about the vehicles they inspect but also about alternatives in the market. In this particular market, the professional seller can also benefit when haggling over a vehicle that the buyer trades in as well as from the buyer's lack of sophistication about financing the vehicle.

The same asymmetry is found in the market for new vehicles, except that it is easier for buyers to be informed about prices because the vehicles are more homogenous than are used vehicles of a given model. Quality is so well known, or observable, that extensive warranties are easier to sell. Even buyers who do not purchase supplemental warranties, but take them as reliable signals of quality, receive substantial warranties with every new car. In this sort of market, and with modern communication, buyers have almost as much information about prices as they do in the stock market, where shares of a given "brand" are perfectly homogenous, and they probably have more information about expected quality. Still, there is haggling, and here the professional seller has a great advantage. Popular models may be hard to come by; unwanted accessories may be embedded in a given vehicle; aftermarket treatments are pushed on inexperienced and risk-averse buyers; and financing is a major profit center for the seller. In all these matters, the seller has more information, outcomes are likely to be unequal among buyers and, when buyers inform themselves, their efforts are duplicative of work already done by others.

Unsurprisingly, innovative sellers occasionally enter the used and new car markets in order to profit from some of the inefficiencies just described. In the case of new cars, General Motors introduced Saturn, a brand aimed at inexperienced car buyers, and especially women, looking for small, inexpensive vehicles as well as a no-haggle environment.²⁶ A Saturn dealer with high inventory could lower a price, but in that case the price would be lowered for all consumers looking at that vehicle. Prices would not depend on the haggling skills or information enjoyed by a particular buyer. Similarly, CarMax has become a major force at the high end of the used-car market. It also promises uniform prices, or no haggling, as well as fairly inclusive warranties to back up its promise that the automobiles in stock have been carefully inspected. The implication is that no duplicative inspection by buyers is necessary. CarMax has survived and at times thrived,

²⁶ George P. Blumberg, *To Sell a Car that Women Love, It Helps If Women Sell It*, N.Y. TIMES, Oct. 26, 2005, available at <http://www.nytimes.com/2005/10/26/automobiles/autospecial/to-sell-a-car-that-women-love-it-helps-if-women.html>. In fact, at least one study showed that Saturn buyers were more male compared to other cars. Thomas J. Cosse & Terry M. Weisenberger, *Saturn Buyers: Are They Different?*, 5 J. MARKETING THEORY & PRACTICE 77, 82 (1997). When gender is evaluated against psychographic variables, the study finds that males purchased Saturns because they were more likely to take advantage of other people's search efforts due to an antipathy to shopping; females purchased Saturns because they were "seriously opposed to negotiations, more so than men." *Id.* Note the possibility of freeriding by men and by women on the comparison shopping undertaken by some enthusiastic shoppers.

but Saturn has folded – though perhaps not because of its pricing strategy.²⁷ Tesla is now the standard-bearer for haggle-free auto sales, but it is better known for its batteries and design, and is hardly a test of consumer preferences for no-haggling. Tesla’s unique brand overcomes a problem that Saturn faced; buyers who are attracted to a no-haggling alternative must fear that they will lose out precisely because this seller aims to attract those buyers who most expect to lose in a haggling process. Buyers might pay a premium for no-haggling. In most markets with set, no-haggle, prices, ranging from stock markets to conventional department stores where prices are marked and employees are not empowered to negotiate over prices, uninformed buyers can free-ride on active buyers who engage in comparison shopping and discipline sellers. But if no-haggle sellers constitute a small part of a market, and aim to serve inexperienced buyers, these buyers may reason that while the prices are set, they are likely to be higher than those found where other, more experienced or adventurous, buyers dare to go.

There is evidence that women and African-Americans obtain worse, which is to say higher, prices at car dealerships.²⁸ Perhaps they are on average less experienced hagglers or, as the sparse but carefully developed evidence suggests, salespeople are less inclined to reduce prices when dealing with these buyers, and perhaps especially so if the salespeople are themselves minorities.²⁹ The sellers might perceive these buyers to be inferior hagglers or they may think these buyers are less inclined to walk away from a high offer lest they offend or disadvantage the salesperson. This last perception could be a kind of profiling or stereotyping, or it could be a matter of reading individuals, and a higher proportion of women or African-Americans are perceived to be of this type. The argument here does not depend on this sort of discrimination, but unequal outcomes that disadvantage women or a racial minority are troubling. In the housing market, if testers discover that the same apartment is offered to whites on better terms than it is to minorities, there is a prima facie violation of the Equal Housing Act.³⁰ The problem, if it exists, is almost surely less serious in the market for automobiles, because arbitrage is possible; in the housing market sellers deal with a named buyer in order to do a credit check. Still, it is hard to see why discrimination of this kind should be acceptable in any market.³¹

Even in the absence of discrimination linked to gender or race, it is easy to see the inefficiency of a system that requires buyers to invest duplicatively in gathering information. Put

²⁷ See Abigail Evans, *Cooperation or Co-Optation: When Does a Union Become Employer-Dominated Under Section 8(A)(2) of the National Labor Relations Act*, 100 COLUM. L. REV. 1022, 1047-1058 (2000); see also David Hanna, *How GM Destroyed Its Saturn Success*, FORBES, March 8, 2010, available at <https://www.forbes.com/2010/03/08/saturn-gm-innovation-leadership-managing-failure.html>.

²⁸ Ian Ayres, *Fair Driving: Gender and Race Discrimination in Retail Car Negotiations*, 104 HARV. L. REV. 817, 819 (1991); see also Nancy Leong & Aaron Belzer, *The New Public Accommodations: Race Discrimination in the Platform Economy*, 105 GEO. L. J. 1271, 1289-1296 (2017) (noting that online markets have not eliminated race discrimination).

²⁹ See Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICH. L. REV. 109, 133-36 (1995) (finding evidence of higher pricing between non-white salespersons and non-white buyers).

³⁰ See Lee Fennell, *Searching for Fair Housing*, 97 BOSTON U. L. REV. 349 (2017).

³¹ The discussion returns to this question in the context of employment in Section III.E.

differently, when car dealers haggle over prices, it is plainly to extract higher prices from unskilled hagglers or uninformed buyers. If the purpose of haggling is to exploit the uninformed or naïve, then it seems sensible to improve the lot of the latter if this can be done at low cost, and if the alternative is to encourage the duplicative and inefficient acquisition of information or to suffer the social loss associated with discouraged buyers.

Haggling as practiced through the ages is more defensible. It eliminated the need to attach a price to every item offered for sale.³² Even in fairly modern times, when sticker prices abound, uniform pricing can be costly in an environment where market conditions change and prices must adjust. But even this is no longer a problem because prices can be stated online, or even posted digitally on shelves,³³ where they are easily changed and inspected, and where formulaic pricing can operate without any additional labor cost on the seller's part. The older practice is found in some open-air markets and tourist stalls where it is surely the case that haggling exploits the amateurs, even as it might give some utility to (other) tourists who enjoy the game that their forbears thrived or starved by.

Haggling might be untroubling, even if it were inefficient, if it redistributed wealth from the rich to the poor. Imagine, for example, that because haggling is time consuming, high earners dispensed with it while low-earning buyers engaged in it in order to get lower prices. In this case, haggling is defensible and not terribly inefficient, especially because high-earning buyers might also not find it worthwhile to invest in information in order to carry out quick and better negotiations. A comparison to queues is instructive. If a seller such as a concert promoter restricts quantity or otherwise structures sales so that many tickets are available only to patrons who camp out and form overnight queues, law can respect the private market and its apparent inefficiency; the professional seller seems to lose money rather than exploit the uninformed. The seller can offer nontransferable tickets, and ask law to enforce the restriction, and perhaps also to pass anti-scalping laws. The promoter may be signaling the high quality of the performance, because overnight lines are more visible than high prices. Similarly, the seller and the performers may seek to form a community of fans who will be loyal customers in the future, and such a community is encouraged by all-night vigils and a little hardship. But these situations and rationalizations are unusual. In most settings, it is plain that bargaining is not an equal-opportunity activity, for it is a skill that improves with experience, self-confidence, access to information, and willingness to convey half-truths.

III. UNIFORMITY OR TRANSPARENCY IN CONSUMER TRANSACTIONS

A. *Uniformity or Transparency*

If negotiable prices bring on duplicative search costs and additional inefficiencies

³² There were also fewer items for sale, and therefore more expert consumers. *See supra* Section II.C.1.

³³ See <http://www.nytimes.com/2013/02/10/technology/digital-tags-help-ensure-that-the-price-is-right.html>

associated with discouraged buyers, law can improve markets by ameliorating these problems. The obvious solution, and one that many sellers choose because of competitive pressure or their own organizational costs, is uniform pricing. There is no haggling and therefore there are no discouraged buyers; moreover, with uniform pricing, buyers can reduce their search costs because they can rely on comparison shopping by fellow buyers. Presumably, law could simply require uniform pricing, but this radical intervention in the interest of efficiency is inappropriate because there may be good reasons for negotiable prices in some settings. Moreover, there is another solution to the problems introduced in Part II, and it is to ensure that prices, if not uniform, are more transparent. By transparent we mean much more than the clear posting or communication of current prices; we include the sort of transparency that will reduce search costs and bring otherwise discouraged buyers to the market. Where prices are negotiable, buyers require information about current and past prices. A transparency requirement, as the word is used here, forces sellers to disclose the prices obtained by other buyers in comparable transactions. Thus, in an auto dealership we imagine that a buyer who asks about a Toyota Camry must (in the presence of a legally imposed transparency requirement) see the prices paid by all buyers of that model in the last thirty days; if there are more than ten such sales, the seller can simply disclose the last ten sales and their prices.³⁴ The conception here is that certain sellers be required to provide either uniformity or transparency, though the details of the transparency requirement, while illustrated here, need to be worked out. Either one will reduce the problem of duplicative search costs as well as the problem of discouraged buyers. Haggling begets duplicative information-gathering, and can push many consumers to the rental market or other less efficient alternatives. These inefficiencies can be reduced by requiring the better and already-informed party to disclose information that will otherwise be duplicatively sought.

In some industries, competition, and especially online competition, has benefited consumers by reducing search costs and it has often done so with a combination of uniformity and transparency. In the case of airline seats, for example, it is plainly unwise to buy the first or second seat available when contemplating a flight between two major cities on a given day. On the other hand, a modern airline website allows the consumer to compare many flights across several days. Most airlines use hidden and complex pricing algorithms, but by and large the consumer can shop quickly and effectively. A careful consumer will also check another airline's website, or that of an aggregator like Expedia but, again, competition keeps these prices in line with one another. Prices are not quite negotiable; they are uniform, in the sense that all buyers can see the variation across classes of seats, time of day, and changing market conditions. If technology allows sellers to

³⁴ If transparency is required by statute or agency rule, as discussed in Part V, a plausible rule is that the seller must post the last ten transactions of comparable items where the actual sales price deviated from the marked or listed price. If there are fewer than ten transactions in the preceding thirty days, then the seller can disclose all the transactions in that period. In a setting with no listed prices, the seller must disclose the information for comparable items. The number of transactions is less important than satisfying the tenet that transparency must be informative enough to substitute for continued search. *See infra* Section III.E. For example, if a buyer is looking at washing machines in a store that sells appliances, the seller must have posted or clearly disclosed the last ten sales of washers, along with the prices that were marked at the time. A buyer will then get a good idea of the range of negotiation, if any.

discriminate among buyers because of access to buyers' information and online practices, then it must be conceded that nonuniform pricing will not lead to wasteful, duplicative searches by buyers. At present, the variations make some search worthwhile, but it is inexpensive to search. The industry has evolved from nontransparency (when passengers engaged in inefficient and duplicative searches for pricing information) to intermediation by travel agents (so that consumers paid others to search), to the present state of near-transparency, if not uniformity. The evolution has been fueled by competitive pressure and technological change rather than by law. Our concern here is with less transparent or simply less competitive markets.

In other industries, sellers have moved entirely to uniform pricing. Thus, a large department store can be understood as a seller that sets relatively fixed, or uniform, prices for all customers and, indeed, is ill-equipped to bargain with individual buyers. In most cases, the seller can and must lower prices as time goes by or as inventories accumulate, but such discounts are offered to all buyers at that time; a wary buyer will not worry that the seller is taking advantage of the latter's superior bargaining ability. In turn, the seller can employ unskilled agents because the seller does not empower these agents to bargain over prices.³⁵ The department store essentially advertises as follows: "We are like a well-developed stock market, offering you significant transparency and a no-haggling environment. You can see our prices, and sometimes even the history of prices and quantities traded,³⁶ and you can be sure that the prices available to you are identical to those offered to everyone else. They rise and fall with demand and supply, but they do so for everyone. As in securities markets, it is possible that sophisticated traders willing to take long and short positions can profit, but at least compared to other retail options available to you, pricing is transparent, and we do not exploit our expertise by bargaining with you. Indeed, you might exploit your expertise or brand loyalty by paying attention to information about periodic and available coupons." A typical buyer does not know the size of the store's inventory or the commissions that various salespeople receive, but the department store gains little advantage in sizing up individual buyers. At a given moment, all buyers face the same prices. Moreover, it would be difficult for law to enforce a requirement that these sellers or institutions provide yet more transparency.³⁷

A law school, in the business of selling seats in its entering class, could do the same – though at present no law school behaves in the manner of a department store.³⁸ A school could

³⁵ Causation might run in the opposite direction. The owner of a large department store may save agency costs by setting inflexible prices that are lowered, if at all, on a storewide or department-wide basis without reference to the inexperience or characteristics of individual patrons. In turn, the store will appeal to buyers who do not want to haggle. It may offer competitive prices because some buyers will engage in comparison shopping; other buyers can free-ride.

³⁶ Quantities sold are normally observed only by repeat and experienced shoppers who observe the decline in inventories.

³⁷ There are important differences between consumer and investor markets. Consumers have preferences that can generate purchases at relatively high prices by informed and sophisticated participants. It can be rational to buy a clothing item or an Apple Watch on the first day it is available even if one knows that the price will drop in the near future. But overall the department store and the stock market have much in common, and yet the latter is more regulated and therefore transparent. This is a function of history and the likelihood of large-scale insider informational advantages.

³⁸ A very few law schools advertise better prices for students with specified credentials, but it is likely that these schools are prepared to negotiate with these students as well as with candidates whose credentials fall just below the

announce that all students pay the sticker price, or that \$20,000 tuition discounts are offered to all students with scores above x on the Law School Admissions Test. There would be no room to bargain, and thus no reason to engage in duplicative information gathering.

B. Transparency and Uniformity in Action: Automobiles, Medical Services, and Law School Tuition

Imagine a rug merchant who is suddenly required to disclose the price history of the firm's sales, unless it switches to nonnegotiable fixed (uniform) prices. If many of the rugs are identical, perhaps machine-made, a buyer will quickly see the average price per square foot, and have a good idea of the market value of a rug under consideration. Even if the rugs are unique, a list of recent sale prices will help the buyer ask what is different about a rug in question. Buyers who learn that others recently purchased rugs at a price of \$20 per square foot, will be less willing to purchase a similar rug at a price of \$50 per square foot.³⁹ In turn, sellers will reduce price disparities unless they are related to the merchant's costs, and they will have less reason to size up buyers in order to estimate their willingness to pay or to compare prices. Note that this proposed transparency requirement does not eliminate price discrimination and does not completely eliminate a buyer's inclination to search. The seller can charge more per square foot for larger (or smaller) rugs; the seller can try to charge more when the buyer pulls up in an expensive car; and the seller can try to charge more to buyers of one sex or race. These are all plausible methods of extracting consumer surplus with nonuniform prices. But these patterns of price discrimination, a topic largely deferred to Part IV, are less likely to succeed when the buyer can see a posted history of recent sales. To be sure, as these methods of price discrimination become more difficult, because buyers are armed with information (requiring virtually no effort or duplication on their part), merchants might raise prices at the low end, or charge a uniform price that excludes some buyers who would have paid more than marginal cost. More complete price discrimination will benefit some buyers, while it harms others and benefits the seller. But buyers in the aggregate will almost surely benefit, if only because their search costs are reduced with more information. The major danger of disclosure is that it can facilitate collusion among sellers, though this is unlikely in the case of rug merchants.⁴⁰

indicated cutoffs. *See, e.g.,* Western Michigan University Cooley School of Law, Scholarships, <http://www.cooley.edu/prospective/scholarships.html>, last visited Jul. 26, 2017.

³⁹ Note that a single rug merchant has little incentive to disclose price history to capture market share so long as any increase in sales is less valuable than price discrimination.

⁴⁰ There is a danger that transparency could induce coordination and price fixing among merchants, especially where merchants are able to view each other's price histories, but this risk remains low when there is a sufficient number of sellers. Each seller maintains an incentive to deviate from an agreed cartel price to capture market share. As the number of sellers increases, it becomes more difficult for the cartel to enforce the coordination agreement. For instance, when the Supreme Court struck down a Rhode Island advertising ban on liquor prices, prices for advertised liquor products fell by an estimated 20 percent. Jeffrey Milyo & Joel Waldfogel, *The Effect of Price Advertising on Prices: Evidence in the Wake of 44 Liquormart*, 89 AM. ECON. REV. 1081 (1996). The ban was struck down on First Amendment grounds in *44 Liquormart, Inc. v. Rhode Island*, 517 U.S. 484 (1996). More advertising likely led to reduced search costs for price information, which led to increased comparison shopping and intensified price competition. Where data-driven algorithms monitor and adjust to competitors' prices, there is a danger that

And when buyers benefit, it will be not only because of the prices they pay, but also because they will not need to waste as many resources on duplicative searches. Moreover, with increased information about past prices, many discouraged buyers are likely to participate in the market. Finally, if the merchant switches to uniform pricing, then the discouraged buyer problem vanishes, and search costs are also reduced.

Merchants can and will adapt to any requirement, or even market norm, of transparency. They might categorize rugs and increase the premiums on some in order to reduce the effect that disclosure has on pricing. A buyer who is offered rug x at a price of 1,000, will be told that it is one of a kind, or that only rug y, sold last week for 1,200, was from the same country of origin, of similar size, and comparable stitches per inch. In fact, an expert would say that rugs u and v were more like x, and they sold at 700 and 750. Transparency has not made the buyer's problem worse; the merchant can always be counted on to provide information suggesting that x is a bargain. But in most cases the buyer will have more information and can reduce her search costs. She can see for herself that there are attractive rugs other than x and y, and she can ask about their quality, knowing that rugs like u and v sold for prices of 700 and 750.

In the case of automobiles, price transparency through consumer-oriented magazines and websites has encouraged dealers to offer varied and expensive aftermarket treatments and financing packages. Vulnerable and uninformed buyers lose out, while other buyers engage in duplicative search for alternative sellers, as dealers try to extract the disposable income that uninformed buyers bring to the showroom. But these sales of add-ons and loan packages can also be subject to a transparency requirement; in particular, sellers could be required to disclose not only the price history of various options but also the fraction of buyers who decline each add-on.⁴¹ Thus, an uninformed consumer who learns that most buyers of an expensive automobile reject an extended warranty, might think harder before purchasing the proffered warranty; alternatively, the price of the extended warranty might drop. In any event, and especially where buyers can easily understand the qualities and categories that are priced, transparency reduces search costs and, often, prices as well.

Prices for medical treatment could similarly be reduced through disclosure of price histories. Patients are often ignorant, or completely dependent on their doctors' recommendations, when choosing among alternative treatments. When a diagnosis is clear and the treatment standard, hospitals are likely to differentiate themselves by price, experience, and success rates. Consumer knowledge of a treatment's price history will exert a downward pressure on pricing, so long as some patients are sensitive to price, and hospitals are unable to raise or maintain high prices through coordination. Price sensitivity is greatest among uninsured and under-insured patients, but

transparency can facilitate collusion, though this concern seems unwarranted in relatively competitive markets. For example, third-party Amazon sellers are able to view prices offered by other sellers and often respond by marking prices downward, not upward. Nonetheless, new forms of collusion may require innovative applications of antitrust law. See ARIEL EZRACHI & MAURICE STUCKE, *VIRTUAL COMPETITION* 247-48 (2017); see also *infra* note 47 and accompanying text.

⁴¹ But this requirement goes beyond the proposal developed here, which is by its terms limited to price information.

the introduction of in-network pricing, preferred providers, provider-insurers, and even prices set by governments, can be understood as the product of greater demand for transparency by insurers. The provision of transparent pricing to insured patients, as written in to the Affordable Care Act,⁴² may exert still greater downward pressure on prices inasmuch as transparency reduces care costs to insurers. Even patients with small amounts at stake are able to foster competition by choosing among providers.⁴³ Common sense suggests that a paying patient who learns that a large insurer has negotiated a price of \$2,000 for a procedure will be less likely to accept a quoted price of \$5,000 for the same procedure. The uninsured, or partly insured, patient – now better informed – is more likely to check prices at competing facilities, or simply to negotiate with the first provider.⁴⁴ Again, it is possible that uniform pricing is a more efficient solution, as it further reduces the individual patient’s search costs. Essentially, the individual can piggy-back on the insurance company’s negotiated price if the provider must charge the same price to all patients. Uniformity would spur enormous change in this industry. On the other hand, it is plausible that some price differentials fairly reflect the lower transactions costs that a hospital experiences with the bulk-purchasing insurer. Similarly, a lower price might compensate the buyer-insurer for its promise to direct all its insureds to the particular hospital. In turn, the hospital might make a more informed decision about the scale of facilities or number of personnel to employ. All these considerations suggest that the more conservative and defensible approach is to require uniformity or transparency. Some sellers might respond with uniformity, as it naturally provides transparency and, in any event, reduces the inefficiencies identified here.

Finally, we return to law school admissions and tuition payments. If schools were required to disclose net tuition information (with some protection of privacy), along with relevant information such as undergraduate grades and LSAT scores, prospective students would engage in less duplicative searching, and schools would have much less of an advantage as compared to ill-informed admitted students, who do not know how hard to bargain for scholarships or tuition discounts. If a law school bucked the trend and sought something other than improved national

⁴² Patient Protection and Affordable Care Act of 2010, 42 U.S.C. §§ 300gg–18(e) (2010) (“Each hospital operating within the United States shall for each year establish (and update) and make public (in accordance with guidelines developed by the Secretary) a list of the hospital’s standard charges for items and services provided by the hospital, including for diagnosis-related groups established under section 1395ww(d)(4) of this title.”). *See also* Fed. Reg. Vol. 79 No. 163, August 22, 2014, 50145-50146 (giving discretion to hospitals on manner and method of making information public in final rule implementation). Note that transparency must be informative enough to reduce duplicative search costs. *See* Section III.E.

⁴³ In a single-payer system, where the state bargains for care from private organizations, transparency is inherent since there is one buyer, the state, that can easily keep a record of its transactions. If the state employs its own medical personnel, there is no bargaining. In either case, increased efficiency from a reduction in search costs is not implicated. Many states mandate some form of transparency and maintain “all-payer claims databases,” but only a few states publish price information for a wide scope of procedures and services on an accessible website available to consumers. *See* FRANCOIS DE BRANTES & SUZANNE DELBANCO, REPORT CARD ON STATE PRICE TRANSPARENCY LAWS, HCI3, July 2016, available at <http://www.hci3.org/wp-content/uploads/2016/07/reportcard2016.pdf> (giving high marks only to Colorado, Maine, and New Hampshire).

⁴⁴ *See*, for example, <https://pricinghealthcare.com/>, which markets provider-uploaded price lists for comparison shopping to patients with high deductibles.

ranking, it could disclose its prices, or scholarships, accordingly. Thus, a school could disclose that its tuition is \$50,000, but scholarships of x , y , y , and z were offered to and accepted by applicants with scores of p , q , r , s , and t . If a discount had been given to someone with work experience, or to someone who brought diversity to the student body, that too could be disclosed, unless lawmakers decided that the law's interest in diversity requires that schools not be asked to reveal net prices for students in certain categories.⁴⁵ Either way, this approach gives the school opportunity to design and carve categories, albeit *ex post* and even strategically, but it provides buyers with much more information than they have at present. Note that if buyers search for information about a school's pricing strategy, as some do at present, they may inaccurately assess the strategy, but the prices they discover will nevertheless be useful in reducing search costs. For example, a prospective student, S , might learn that two other students, T and U , received larger scholarships than did V and W with the same scores. S might attribute T and U 's good fortune to the fact that they had been interns for a judge, as disclosed by the law school in question. S may be wrong; the law school may have valued the business startup experience that T and U offered, or it may have sought gender balance, as offered by these applicants, in the entering class. These features may not have been made apparent in the school's disclosure, and a requirement of full disclosure of the reasons for each price variation would be unenforceable and unworkable. Nevertheless, S is better informed with the disclosure than without it.⁴⁶ In short, even if schools respond to a uniformity-or-transparency rule not by offering uniform, nonnegotiable prices, and not with perfect disclosure in the spirit of the transparency requirement, but by divulging pricing information that hides their true pricing strategies, buyers will expend fewer resources in the (duplicative) hunt for information.

We do not claim that transparency will entirely eliminate duplicative searching by

⁴⁵ On the other hand, if the prices paid by African-American students are, for instance, excluded, then other African-Americans will not benefit from the transparency rule, as they will need to acquire information in order to negotiate better deals. In our framework, excluding certain price information from a transparency requirement is equivalent to recognizing that the benefit of eliminating duplicative search within a single group of students does not exceed the reduction in dynamic efficiency (i.e., the longer-term diversity benefits that accrue to society due to university investment) gained from engaging in price discrimination across multiple groups of students. It is implied that full transparency will reduce a school's ability to offer different scholarships based on race, perhaps because there may be public backlash or even litigation. We express no view here on the correct balance among diversity, democratic openness, and the ability of private schools to invest in diversity as they like. The point is simply that full transparency alters the likely balance.

⁴⁶ It is tempting to suggest that schools run (and disclose) multi-variable regressions in order to reveal the several factors that go into their merit scholarship decisions. Time might be one of these factors, as scholarships rise and fall depending on the school's inclination to reach a higher media GPA or LSAT with the last few transactions. But more disclosure threatens information overload, and for the present it is enough to propose uniformity-or-transparency as to price, without over-specifying the price of what, exactly.

The discussion in the text suggests that information provided by the seller is more reliable than that available from fellow consumers, through crowdsourcing, both because the seller in fact develops the pricing strategy and because the seller might be held responsible for false disclosures. Crowdsourcing should not, however, be underestimated; it has been the force behind increased negotiation regarding law school tuitions, and there are surely settings where consumers trust the information from (even) anonymous peers more than any they receive from their adversary, the seller.

prospective law students. Even with uniformity there will be a small amount of duplicative comparison shopping. But however schools respond to a uniformity-or-transparency requirement, it is almost surely the case that students will engage in less duplicative information-gathering. The gain may be less (or more) than that enjoyed by consumers in other markets, such as hospital patients. Uninformed students who are subsidized by their families or by government loans may be less price-sensitive than is ideal. They may simply believe that high prices signal quality and high future earnings. But transparency will surely reduce search costs, and that is our primary aim and claim here.

Might a law school offer transparency in the absence of a legal requirement? The discussion in Part V suggests some consumer-initiated means to this end, but it is easy to imagine a seller taking the lead. One way to differentiate oneself and attract customers is to offer services that competitors do not, and this is what we observe on airline websites, with more disclosure over time. Similarly, some sellers might have started offering uniform pricing, not because their internal agency costs made it unwise to delegate price-cutting and haggling to employees on the floor, but because buyers gravitated to stores where they did not need to haggle, and where prices were sometimes revealed in advertisements in advance of any commitment to travel to the given store. In the case of law school admissions, however, consumer decision-making is not spontaneous and is rarely done when visiting the seller. A law school, L1, that offered transparency, providing a full list of accepted offers with information about prices, scores, grades, and perhaps other information, would lose its bargaining advantage and end up collecting less (net) tuition for the same “quality” applicant. Meanwhile, a comparable law school, L2, would not lose students to L1, assuming that students apply to both schools.⁴⁷ At first, L2 might be advantaged by L1’s disclosures; if L1 offers tuition discounts, often steeper the more competitive the student, L2 can design its own pricing strategy, and perhaps compete away students at the margins of L1’s groupings. In the long run, however, as L1 and L2 compete for students, L2 will essentially be forced to copy L1, so that L1’s price list offers students an enormous amount of information about L2’s prices. It follows that if one or more schools choose to disclose prices, there will be a transfer of wealth from the schools to the students.⁴⁸ The schools will have lost their bargaining advantage. As a matter of social welfare, however, there is a gain because students do not need to engage in duplicative searching.

It is possible that some law school, like L1, will nevertheless choose to be transparent and nudge the industry toward more openness, and reduced search costs, without legal intervention. It

⁴⁷ The example in the text is most convincing when the schools are similarly ranked and geographic neighbors, like New York University and Columbia for instance, because it is easier to imagine that a price differential will cause students who are admitted to both institutions to choose one or the other. But even if there is disparity in ranking and location, it is plausible that there is an across-the-board price differential that causes a large number of students to switch from one to the other. Students who are admitted to Columbia and Penn, for instance, might regularly choose the latter if there is a price discount of \$x. In that case, the analysis in the text holds, and if either institution elects to be transparent, the other will benefit at first, but then be more likely to choose transparency as well.

⁴⁸ In the long run, the school may offer fewer amenities in which case there is a transfer among students, but the discussion here refers to the apparent short-run consequences.

might be motivated by a belief that it will be rewarded by applicants who appreciate its first-mover and other-regarding decision. It might observe information-sharing on admitted student websites, and feel disadvantaged by nontransparency, because some of the information about its own pricing is false; the school, unlike random posters on a website, will be subject to fraud claims if its disclosures are false. A reasonable conjecture, however, is that this has not yet occurred because schools are reluctant to reveal pricing information that is linked to gender or, especially, race. If that is the case, there will be extra resistance to the proposal advanced here. Voluntary disclosure is even less likely in the health-care industry because hospitals enjoy some local market power; fewer patients than law students will travel long distances for a better price.

These examples of mandated transparency – assuming the seller chooses to continue to negotiate prices rather than make them uniform for all buyers in a given period – raise the obvious question of why yet one more disclosure requirement will make any difference to real consumers, who are often bombarded with information in fonts and boxes of various sizes, and are known to ignore most of what law forces sellers to thrust in front of them.⁴⁹ But there is no evidence or reason to think that consumers ignore price information, or even knowledge that prices are negotiable where they might have thought otherwise. Nor is there reason to think that the benefit of transparency to some consumers, in the form of reduced search costs, will harm others.

C. More Law and Less Bargaining in Business-to-Consumer Transactions

The argument thus far is that there are markets in which law ought to displace some bargaining freedom. In particular, negotiable prices raise search costs and inefficiently discourage some buyers. A uniformity-or-transparency rule ameliorates these problems. In some cases, transparency will work best in conjunction with sound enforcement of antitrust law. Markets that already exhibit persistent failures and inefficiencies, such as hospital services, may actually be improved competitively with a transparency requirement—beyond a reduction in search costs—if hospitals are competing on price in less concentrated markets. It should be clear that transparent prices will do little to rein in high costs if firms are not competing on price. Similarly, if transparency has the perverse effect of increasing coordination among firms, it may reduce welfare and require more rigorous enforcement of antitrust laws.⁵⁰ Our claim is that transparency, like uniformity, reduces search costs and will enhance welfare in sufficiently competitive markets.

Unfortunately, there is no magic way to sort industries or firms in order to limit the uniformity-or-transparency proposal to cases where it is certain to produce net benefits. A case-by-case determination could be delegated to the Federal Trade Commission or another authority. There is, however, the danger of inefficient rent-seeking behavior as industries try to escape the

⁴⁹ See OMRI BEN-SHAHAR & CARL E. SCHNEIDER, MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE (2014); Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PENN. L. REV. 647, 743 (2011) (noting that “length, complexity, and difficulty” lead to unsuccessful mandates).

⁵⁰ *Supra* note 37.

requirement or force some firms into it.⁵¹ Moreover, a transparency requirement brings on enforcement costs, and these too must be weighed against the expected gain to consumers who would otherwise search for information. It is plausible that the requirement should apply by default to all sellers of goods and services, inasmuch as price disclosure saves search costs and is unlikely to do harm. Exceptions can be made for sellers with low annual sales. For example, the seller at the neighborhood art fair and the occasional antique dealer could size up customers and bargain accordingly; their goods are, in any event, not easily categorized so that information about past sales may not be worth the candle. In a typical shopping mall, where there is little haggling, the rule might simply be that prices must be indicated on every item or shelf (as already required in some jurisdictions⁵²), and the seller must post recent exceptions to these marked, uniform prices. Thus, if a store does bargain over rug prices, then a notice must be posted, and customers can view the history of recent sales, or departures from posted prices. The storekeeper might insist that these past sales were of inferior goods, or categorize the goods in a way that misleads consumers, but at least consumers will have more information than at present. Affirmative misstatements by a seller will invite fraud claims.

Our intuition is that the uniformity-or-transparency requirement should be limited to consumer transactions, including, perhaps, some employment agreements. If so, the requirement would not apply to large law firms selling services to corporate clients, to wholesalers selling appliances or foodstuffs to stores in a shopping mall, or even to Facebook when it sells advertising to businesses – though the discussion in Section IV.E suggests that there might be good reason for transparency in that market inasmuch as price discrimination is tolerated and even welcome. There are several reasons for this intuition about limiting transparency to consumer transactions. First, there is the danger that the disclosure of prices by wholesalers and manufacturers, including the necessary categorization of goods and services, will raise rather than lower prices, because it enables cartelization and price-fixing even as it facilitates comparison shopping. There is a good argument that this is more likely where there are fewer sales for the cartel to monitor. Second, commercial (as opposed to consumer) buyers are often repeat players and are better equipped to search and negotiate. Third, repeat buyers engaged in large transactions are likely to develop or have access to low-cost search strategies. Finally, the discouraged-buyer problem is surely more severe with consumers than businesses. Consumers might be scared away by the prospect of being out-haggled by a professional seller, but commercial entities are less likely to be chilled, and indeed may themselves be skilled bargainers who prefer to do business where prices are negotiable,

⁵¹ Some industries might want law to impose transparency. For example, a large department store that sells rugs might be better off if independent rug merchants lost their haggling and pricing advantages.

⁵² *See, e.g.*, New York City Admin. Code § 20-708 (2016) (“All consumer commodities, sold, exposed for sale or offered for sale at retail except those items subject to Section 20-708.1 of this code, shall have conspicuously displayed, at the point of exposure or offering for sale, the total selling price exclusive of tax...”); Code of Massachusetts Regulations § 3.13 (1)(a) (2017) (“It is an unfair and deceptive act...to fail to affix to any goods offered for sale to consumers [without UPC codes] the price at which the goods are to be sold.”); New Jersey Admin. Code § 13:45A-14.10(a) (2012) (“Whenever a regulated consumer commodity is exposed or offered for sale at retail, the unit price and retail price shall be disclosed”); Regulations of Connecticut State Agencies § 21a-75-4 (2018) (providing for unit price disclosure).

often secret, and nonuniform.

D. Legal Services

In the law firm context, transparency would therefore be limited to firms that deal with personal injury, divorce, and other “consumer” transactions. These firms would be required to disclose the price term of past transactions to potential clients. Price differentiation is allowed, meaning that different products can come with disparate prices, but transparency is then required. A firm would need to disclose hourly rates, but it must also disclose negotiated exceptions. For example, a firm might advertise that “contingency fees are 33%, but 50% for cases that go to trial,” and then post recent exceptions to these prices. It must not say to a potential client “Well, how much do you think a good divorce lawyer is worth?” unless the consumer is handed a list, redacted where necessary, of recent divorce clients and the fees they paid. The suggested disclosures are unlikely to run afoul of ethics rules, but if they do, it is the rules that ought to be modified.

It is not unthinkable to extend the transparency requirement to law firms with business clients, inasmuch as these buyers of legal services no doubt waste resources searching for information about prices. But the services at issue are rarely identical to those sought by other buyers, so that comparative price information alone is unlikely to do much about duplicative search. The same can be said about the hourly rates charged by lawyers to business clients. Buyers might like to know whether the hourly rates quoted to them differ from those charged to other clients, but that is only a small part of the buying decision; it is hard to compare information about how cases are staffed, how lawyers with different hourly rates are assigned, and so forth. Legal services for nonbusiness clients such as will-drafting, residential conveyances, and no-fault divorces exhibit greater homogeneity; even contingent-fee pricing, when it varies, is susceptible to patterned regularity. It is where services themselves are duplicated across customers, that there is significant opportunity to eliminate duplicative search.⁵³ In other cases, where no two purchases are alike, price information may be valuable but the costs savings will be less dramatic.

E. Employment Relations and Gender Disparities in Earnings

A more difficult question is whether transparency ought to be required in employment relationships, though these are not conventionally categorized as consumer transactions. The individual who takes a job at an auto dealership or hospital is in the same position as the consumer

⁵³ The division between fee-for-service versus hourly pricing is sharper in Europe where civil law notaries often charge set fees for nonadversarial legal services. A transparency requirement may do more harm than good in this market however, given that governments strictly control entry and notaries could more easily coordinate pricing for services when fees are not regulated. *See generally*, Pedro A. Malavet, *Counsel for the Situation: The Latin Notary, A Historical and Comparative Model*, 19 HASTINGS INT’L & COMP. L. REV. 390 (1996); *see also* Paavo Monkkonen, *Are Civil Law Notaries Rent-seeking Monopolists or Essential Market Intermediaries?: Endogeneous Development of a Property Rights Institution in Mexico*, 43 J. PEASANT STUD. 1224 (2016) available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5467891/>.

who shops there; in both settings, duplicative search can be avoided by a transparency requirement. In fact, employers often post uniform wage information in order to attract appropriate job applicants. When there is room to bargain over wages, it is often because workers bring different skills to the job, they earned disparate amounts in prior jobs from where they are recruited, or the employer needs an employee for a particular purpose or location. In short, consumer transactions more often involve identical products, and a transparency requirement is therefore more useful for consumer transactions than it would be for employment arrangements. More important, in the post-bargaining period, a consumer has little recourse if she discovers that others paid lower prices. She simply learns to search more the next time. In contrast, an employee who compares notes with fellow workers and discovers that haggling might have been worthwhile, can always renegotiate or depart – or, what is worse from the employer’s perspective, be resentful. This is the flip side of the observation that a consumer who fears price discrimination can buy in the secondary market from another consumer, while employment contracts cannot normally be sold to another employee. In any event, employers often combat the resentment problem by making wages uniform, or even transparent, without any legal nudge.

The more skilled the labor force, the more likely it is that jobs and, therefore, wages are not comparable. For instance, the competencies of individual scientists who work for a private laboratory or university faculty exhibit higher levels of variation than those of workers in lower-skilled industries. Transparent wages reduce duplicative search only to the extent that workers can be compared.

On the other hand, there is evidence that some part of the male-female wage gap is attributable to the (disproportionate) disinclination of women to negotiate compensation, to request raises, and to ask to make more than co-workers.⁵⁴ It is easy to describe this as a problem of gender equality, but there is also an efficiency element; the asymmetrically ill-informed individual is selling labor rather than buying a consumer good, so we might label this a discouraged-seller problem. Women who are paid less than men, even if their productivity is equivalent or greater, are more likely in the long run to exit the workforce, avoid it altogether, or base their choice of industry, vocation, or position on a tendency to avoid negotiation.⁵⁵ Workers are allocated, therefore, partly on their taste for haggling instead of more fully on their productive output. This is analogous to an excise tax born by non-hagglers that may fall disproportionately on women, and in any case, results in an inferior allocation of labor. Over time, dynamic efficiencies generated by the longer-term diversity benefits that accrue to society are lost.

⁵⁴ See Andreas Leibbrandt & John A. List, *Do Women Avoid Salary Negotiations? Evidence from a Large Scale Natural Field Experiment*, Nat’l Bureau of Econ. Research, Working Paper No. 18511, Nov. 2012. See generally LINDA BABCOCK & SARA LASCHEVER, *WOMEN DON’T ASK: NEGOTIATION AND THE GENDER DIVIDE* 19–20 (2003).

For an interesting idea to combat the apparent inclination of men but not women to ask for more than their peers are paid, see Adam M. Samaha & Lior Jacob Strahilevitz, *Don’t Ask, Must Tell – and Other Combinations*, 103 CAL. L. REV. 919, 985-86 (2015) (suggesting that, at least where discrimination has been found, women be given more information than men).

⁵⁵ The tendency may follow repeat observations of other women faring poorly or being treated badly in negotiations. For a controversial view, attributing female distaste for haggling to a deficiency of female aggressiveness, see SHERYL SANDBERG, *LEAN IN: WOMEN, WORK, AND THE WILL TO LEAD* (2013).

The gender-disparity perspective encourages us to propose that the uniformity-or-transparency rule be extended to employment relations, or perhaps simply to view individual hiring and promotion decisions as consumer transactions. Transparency in this area is not a novel suggestion,⁵⁶ and the problems it poses are complex. In smaller workplaces, like many law faculties, transparency can surely create envy where there is presently a spirit of cooperation; uniformity puts more stress on nonmonetary benefits, and makes it easier for competitors to pick off stars. And if high-end professional workers are hard to compare, as already suggested, it might be enough to disclose the gender gap, or take other steps to encourage more bargaining, rather than less, by those previously disinclined to do so.⁵⁷

F. Paying for Transparency

Transparency is socially valuable only if consumers can and will use the information to reduce their search costs. It is often the case that required disclosures are too long or complex for most consumers and, even when they are straightforward, consumers often ignore them, perhaps relying on other, careful shoppers to make markets work. Fortunately, price information is familiar, short, and simple, and likely to undergo rapid and accurate cognitive processing.⁵⁸ Moreover, there is market evidence that buyers value the sort of information advanced by our proposal. For instance, many car buyers pay for *Kelley Blue Book* information, and collectors of fine art pay for appraisals or directly subscribe to databases that catalog past auction prices.⁵⁹ They would not pay for useless information.

It is interesting that sellers rarely offer past price information for sale. An alternative to the proposal advanced here would be that, in the absence of uniform prices, sellers must offer transparency, but can demand payment for it. Unfortunately, markets for information are difficult

⁵⁶ See, e.g., Cynthia Estlund, *Just the Facts: The Case for Workplace Transparency*, 63 STAN. L. REV. 351 (2011) (discussing workplace transparency's impact on contracts, compliance, reputation, employer costs, and secrecy interests when workers and others look for information about price, parental leave, and a host of other workplace characteristics). The idea that transparency increases accountability and compresses wages has found some empirical support in public sector pay. Following mandated transparency for public sector wages in California, managerial wages fell by seven percent. See Alexandre Mas, *Does Transparency Lead to Pay Compression?*, NBER Working Paper No. 20558, Oct. 2014. When wage disparity is based in part on legacy variables such as experience, an immediate change to transparency may have smaller short-run effects. See Lydia Dishman, *Why Salary Transparency Didn't Eliminate the Gender Wage Gap at this Startup*, FAST COMPANY, Mar. 31, 2016, available at <https://www.fastcompany.com/3058447/why-salary-transparency-didnt-eliminate-the-gender-wage-gap-at-this-start>.

⁵⁷ For example, uniformity-or-transparency might be required for associates in a law firm but not partners, inasmuch as the latter are harder to compare because they come with different books of business, experience, and specialties. Similarly, senior faculty might be different from their junior colleagues – except that this distinction is likely to leave untouched the pay disparity issue.

⁵⁸ See LARRY SAMUELSON, *EVOLUTIONARY GAMES AND EQUILIBRIUM SELECTION* 24 (1998) (noting that learning occurs at higher levels in “strategic situation[s] that [are] frequently encountered and sufficiently simple and important enough to command attention”); see generally, DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* (2011).

⁵⁹ See, e.g., Christie's, *Past Auctions: Results, Sales, Price Realized*, <http://www.christies.com/results/>, last visited Jul. 23, 2017; LiveAuctioneer's, https://www.liveauctioneers.com/auction_results.html, last visited Jul. 23, 2017 (aggregating multiple auction houses' results).

to sustain because it is easy for a buyer to share the information with others.⁶⁰ *Kelley Blue Book* is the exception rather than the rule, in part because it, or more technically its competitor, has been deemed to select and arrange (mere) data about cars in a manner sufficiently original to earn copyright protection.⁶¹

If sellers must be transparent, and cannot or may not sell this transparency, they may react by differentiating products, as discussed above.⁶² They may do this to facilitate price discrimination and they may do it to obscure the price information inasmuch as it will then more often be the case that a consumer wants a product for which there is no precise, prior sale price information. Still, common sense suggests that while such a seller may make price information less useful, transparency will reduce search costs.

G. Transparency, Disclosure Rules, and the End of Hagglng

The idea of requiring uniformity or transparency for most consumer transactions is meant to bring an end to most haggling. It is a radical proposal, given the long history of that selling process. But transparency is of a piece with labeling requirements, consumer finance regulations, and other legal innovations that have found their place in law over many years, and can be understood as economizing on search costs.⁶³ In most cases, law imposes obligations on the seller, who is best situated to develop and report information in a nonduplicative manner, and often able to pass on the cost of an information requirement.⁶⁴

⁶⁰ Information can be something of a public good, exhibiting nonexcludability as well as nonrivalry. As such it is likely to be under-produced in a free market. On the other hand, product differentiation can be used to extract information about the marginal benefit users receive. See Christopher S. Yoo, *Copyright and Public Good Economics: A Misunderstood Relation*, 155 U. PENN. L. REV. 635 (2007); see also LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* 120 (2001) (noting that digitized information can be copied perfectly without cost).

⁶¹ CCC Information Services, Inc. v. MacLean Hunter Market Reports, Inc., 44 F.3d 61 (2d Cir. 1994). The case involved data taken from *The Red Book*, Kelley's less well-known competitor.

⁶² Section III.B.

⁶³ See 79 Fed. Reg. 71156, Food Labeling; Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments (providing information on caloric content of food to decrease risk of obesity); see also 66 Fed. Reg. 1750 Retained Water in Raw Meat and Poultry Products; Poultry Chilling Requirements (providing rules to promote both safety and informed purchasing decisions); 49 C.F.R. 571.208 Occupant crash protection (same); Consumer Financial Protection Bureau, eRegulations, <https://www.consumerfinance.gov/eregulations/1026>, last visited Jul. 24, 2017 (Consumer Financial Credit Bureau site summarizing and referencing disclosure rules with respect to home mortgages, auto loans, student loans, and credit cards); Saul Levmore, *Securities and Secrets: Insider Trading and the Law of Contracts*, 68 VA. L. REV. 117 (1982) (demonstrating law's intervention where search costs can be reduced).

⁶⁴ Thus, the seller of a used automobile may know of some serious structural weakness caused by a collision, deftly but not completely repaired. The buyer can insist on a test-drive, and pay a mechanic to inspect the car, but each step adds to the buyer's transaction costs. These expenditures will not be reimbursed if the buyer decides not to buy the car. But the seller might offer a limited warranty or show the buyer evidence of a mechanic's inspection to encourage purchase, and presumably collect a slightly higher price for the vehicle in the process.

It is interesting to imagine a buyer who asks questions of the seller before gathering information about the vehicle, and then sues for her inspection costs if the seller's disclosures are found to be incomplete or misleading. The buyer

In some cases, the most efficient provider of information is the buyer. Thus, the doctrine of utmost good faith in insurance law generally requires that the insured must disclose everything material to a reasonable insurer, and here it is the insured – the buyer of insurance – who has better information and can economize on overall search costs. While courts generally do not apply “utmost” good faith to ordinary insurance relationships, they consistently apply it in the context of reinsurance.⁶⁵ The rationale is that reinsurers who are asked to cover catastrophic risks must be able to rely on the insured’s utmost good faith to avoid duplicating the costly underwriting and administrative work of the initial insurer.⁶⁶ That ordinary insurers only receive basic good-faith protection generates incentives for exerting efficient underwriting effort during the creation of the initial policy. Enhanced good-faith protection for reinsurers plainly takes aim at duplicative search costs. In contrast, the unwillingness to apply the doctrine against the typical insured reflects a (sometimes perverse) consumer protection mindset.⁶⁷ The idea may be that amateurs will sometimes fail to disclose because of mistake or forgetfulness, and law will have trouble distinguishing between mere oversight and bad-faith nondisclosure. These examples point to the emergence of rules that minimize information-gathering costs, and that is precisely what transparency and uniformity encourage. Haggling should continue on its path to obsolescence.

In principle, price information might be forthcoming without any new legal rules. A buyer can ask about price just as she can ask about quality. For example, if the seller of a used vehicle does not offer a warranty or full information about a vehicle’s history, the buyer can ask specific questions, including “Has this vehicle had any major repairs?” The seller cannot lie. If the seller is silent, the buyer is likely to infer the worst. Similarly, a buyer who faces nonuniform prices when shopping for a new vehicle could ask for a list of prices at which comparable vehicles were sold over the previous month. In turn, just as law has come to save buyers this step with regard to some product characteristics, so that the seller must disclose rather than be silent or hope that a

can ask whether the car uses a good deal of oil, for example, and then if a mechanic’s inspection reveals a leak, and the buyer declines to purchase the vehicle, the buyer could sue the seller for the amount paid to the mechanic and for the buyer’s time. But law is unlikely to allow this claim both because the seller’s misdisclosure and the mechanic’s report will often be less than clear-cut and because the buyer’s time is difficult to value. The buyer could ask the seller upfront to agree to this sort of reimbursement, but the seller is unlikely to agree, and for the same reasons. Even in the case of home inspections, sellers will not agree or be made to pay for the buyer’s home inspection costs when the inspection reveals a flaw known to the seller.

⁶⁵ *Compagnie De Reassurance D’Ile de France v. New England Reinsurance Corp.*, 57 F.3d 56, 61-68 (1st Cir.) (1995) (reinsured owes reinsurer utmost good faith in its representations); *Compagnie De Reassurance D’Ile de France v. New England Reinsurance Corp.*, 944 F. Supp. 986, 992-94 (D. Mass. 1996) (documenting the history of the rule requiring standard good-faith representations from the ordinary insured and utmost good-faith representations from the reinsured); *Christiania General Ins. Corp. of New York v. Great American Ins. Co.*, 979 F.2d 268, 278 (2d Cir.1992) (reinsured owes reinsurer “utmost good faith, requiring the reinsured to disclose to the reinsurer all facts that materially affect the risk of which it is aware and of which the reinsurer itself has no reason to be aware”).

⁶⁶ Indemnity doctrine and factual warranties further suppress moral hazard. The former limits recovery to the value of the goods lost. The latter, if breached, release the insurer from any obligation to cover losses.

⁶⁷ Cf. Jay M. Feinman, *The Law of Insurance Claim Practices: Beyond Bad Faith*, 47 TORT TRIAL & INS. PRACTICE L. J. 693, 709 n.86 (2012) (noting that “[l]arge entities that negotiate terms of policies on a relatively equal footing with insurers are protected by the same good-faith principles, but the nature of their relation with the company is substantially different, so the application of those principles is different”).

key question goes unasked, it could do so with respect to price negotiability and history.⁶⁸ Much as the law has come to require homeowners to disclose the presence of termites, and to apply the doctrine of utmost good faith to reinsurers, it could and should economize on duplicative search costs, and solve the problem of discouraged buyers, by requiring uniformity or transparency about prices and past prices. If the transparency requirement is onerous, it may bring about the end of haggling, which is almost surely a desirable outcome.

IV. PRICE DISCRIMINATION IN THE SHADOW OF A UNIFORMITY-OR-TRANSPARENCY REQUIREMENT

A. Introduction: Desirable Price Discrimination

It is apparent that the uniformity-or-transparency requirement makes price discrimination by sellers more difficult. Uniformity on its own is normally inconsistent with price discrimination; the former requires that all buyers face the same prices, at least in a given time period, while the latter aims to charge different prices to buyers with different elasticities of demand in order to extract great revenue from them. Price discrimination can survive only if the seller can separate these buyers by time or product differentiation. Thus, if a new iPhone is introduced at a very high price, and then its price is reduced for all consumers two months later, the seller has provided uniform prices – and little search is required of consumers – but successfully discriminated between those very eager to be among the first to have the new phone and those who simply prefer the phone to their present one. Similarly, a gold Apple Watch, offered at a very high premium, may succeed in gaining revenue from buyers who will pay far more for exclusivity than the marginal cost of producing the item. But in most cases price discrimination is synonymous with nonuniform prices, and its success requires that consumers be ignorant of the lower prices available elsewhere for the same good. Arbitrage must also be difficult; price discrimination is defeated when someone can buy the good at the low price and then find and resell to the consumers willing to pay more.

A seller price discriminates in order to increase profits, but there are situations in which

⁶⁸ Famously, there are some things sellers must disclose even if not asked, and silence is no defense. Thus, sellers of houses must disclose termites and poisoned water wells. *See* *Obde v. Schlemeyer*, 353 P.2d 672 (1960) (termites). *Janinda v. Lanning*, 390 P.2d 826 (1964) (contaminated wells). In both cases there is a net social loss if the problems go unrepaired. Price information may not seem to fit the category, but past prices are analogous, if the category is described as information many buyers will duplicatively seek.

Consider, for example, the seller of a car who knows of a weakened chassis or tire, as opposed to one who knows that his car has simply rusted more than average. A reasonable position is that the chassis and tire are like termites, but the rust is not. A reasonable seller, or owner, will not necessarily repair or decline to drive a rusty vehicle. A weakened chassis or tire needs immediate tending, and it is therefore socially efficient to give the buyer this information. As a matter of law, the Federal Trade Commission's Used Car Rule is not terribly helpful. Among other things, it calls for disclosure regarding "the major mechanical and electrical systems on the car, as well as some of the major problems that consumers should look out for." *Dealer's Guide to the Used Car Rule*, FEDERAL TRADE COMMISSION, available at <https://www.ftc.gov/tips-advice/business-center/guidance/dealers-guide-used-car-rule>.

this discrimination is regarded as desirable rather than as simply redistributing wealth from buyers to a seller. First, where a monopoly is inevitable, price discrimination can reduce or eliminate the inefficiency, or deadweight loss, that normally accompanies monopoly pricing. Second, and often overlapping, there are industries with high fixed costs and low marginal costs, where price discrimination may be the best way to sustain a firm. If the firm produces essential goods, such as clean water in a rural area, a new drug that can cure an epidemic, or even phone service, it is especially important that some price discrimination be possible, unless the government is able to subsidize the good or provide it as a public project. In this Part, we begin with the economics of price discrimination and then show that where there is desirable discrimination, it can often survive a uniformity-or-transparency requirement. In the few cases where it cannot, we suggest that the requirement be relaxed. These cases are fairly easy to identify.

B. The Basic Economics

In a perfectly competitive market, a buyer who values a good above its marginal cost is normally able to acquire it at the market price as determined by the intersection of supply and demand. An inframarginal buyer gains consumer surplus, because she would have paid more for the good, but is able to acquire it at the prevailing price. A seller that tries to raise the price in order to extract this buyer's surplus will lose the sale to a competitor. However, where competition is imperfect, and certainly where a monopolist operates in a market, the seller is likely to price above marginal cost and extract some of this consumer surplus while earning monopoly profits. The equilibrium price will be above marginal cost. In these settings economists often favor legal intervention to eliminate the monopoly but, where that is difficult, a very different approach is to eliminate the inefficiency by allowing the monopolist to price discriminate among consumers. If the monopolist can engage in (what is sometimes called first-degree) perfect price discrimination, then it can charge each buyer the price that buyer is willing to pay. The discriminating seller must be able to identify the high-valuing buyers and then prevent arbitrage among buyers. The more complete the price discrimination, the less the deadweight loss. In the extreme, the outcome is as socially efficient as perfect competition, though there is redistribution from the buyers to the seller.

For example, imagine that consumers A, B, C, and D would pay 10, 7, 6, and 1, respectively, for a good that only M is licensed to sell. M's cost of producing one unit of the good is 1, but a second unit can be produced for 2, a third unit for 5, and a fourth unit for 9, as the resources needed for production are scarce. It is efficient to provide the good to all the customers but D; only D values the good at less than its marginal cost of production. With competition, the market would clear at a price of 6, the third consumer C's willingness to pay. Note that there will be profit of $18 - 8 = 10$, but a fourth unit of production would cost 9 and only be valued at 1 by D. If M's license gives it a monopoly, and it need not fear new entrants, then M will want to produce two units rather than three. It will sell to A and B at 7, and this revenue of 14 will be reduced by the cost of $1 + 2$, for a profit of 11. This is nothing more than an example of the monopolist's setting marginal revenue equal to marginal cost, and reducing output. The monopolist prefers not

to sell to C, because lowering the price to 6 sacrifices further the revenue obtained from A and B. But what if M can price discriminate, and prevent arbitrage, so that it is impossible for any buyer, like C, to buy at 6 and resell to A? In that case, M is happy to sell to C at 6 (because M's marginal cost for a third unit is 5), if M can still charge 7 to A and B. It is even better for M if it can sell to A at 10, B at 7, and then C at 6. This is perfect price discrimination and it produces revenue of 23 with a cost of production of 8, for a profit of 15. Moreover, every buyer willing to pay more than marginal cost is satisfied. There is something of a wealth transfer from A and B to M, but no deadweight loss.

Price discrimination is possible whether marginal costs are increasing, constant, or decreasing.⁶⁹ Decreasing marginal costs imply the presence of ever-increasing economies of scale, which is tenable only if production factors are perfectly adaptable. The textbook example is the utility provider. Once a power grid or a cellular network has been built, production factors do not require further change to service additional clients.⁷⁰ Price discrimination is generally favored in these cases as a self-contained method of ensuring that service is widely available and no new, distortionary, taxes are needed to keep the utility afloat. In these situations, if law allows or encourages a price-discriminating monopoly, law usually regulates prices in order to ensure broad distribution as well as some limit on the monopolist's extraction. The monopolist cannot raise prices or refine its discriminatory pricing schedule without the approval of the regulator. An alternative is to auction the monopoly right, with the government *paying* the low-cost provider.⁷¹ But this requires necessarily distortionary taxes, or pricing above marginal cost. Low and even zero marginal cost situations are increasingly common, in large part because of the digital economy. As we will see, law may already reflect the idea that transparent or uniform pricing offers a way of economizing on information-gathering costs in such markets.⁷²

The preceding example illustrates how price discrimination can generate allocative efficiency, and be preferable to a conventional monopolist with uniform pricing, but an overlooked problem is that it can also engender wasteful rent-seeking. In many cases monopoly power, necessary for price discrimination, is made possible because of barriers to entry established by law. There are, for example, serious legal hurdles that prospective airlines, electric utilities, hospitals, and law schools face. A monopolist will often facilitate its price discrimination strategy

⁶⁹ PINDYCK & RUBINFELD, *supra* note 8 at 409.

⁷⁰ In most cases, administration costs can be considered negligible.

⁷¹ For example, Congress has granted the FCC authority to auction mutually exclusive licenses. *See* 47 U.S.C. § 309(j).

⁷² This approach becomes less attractive as a market's cost structure reflects constant or increasing costs. For instance, airlines are characterized by high fixed costs but then by substantial and even increasing marginal costs, as passenger counts increase. More precisely, marginal costs can be characterized by a series of decreasing u-shaped cost curves followed by a series of increasing u-shaped cost curves. As these costs increase, fewer passengers are willing to pay the marginal cost of transport. In this setting, price discrimination is less valuable because airlines are unable to satisfy customers cost-effectively. When airlines sell first-class seats at prices much higher than coach or even business-class seats, they are engaging in third-degree price discrimination. But when we see comparable and even adjacent airline seats sold at different prices, we are probably observing an airline using prices to clear a market, or fill a flight.

by keeping out competitors, and to do so it will call on lawmakers to erect or maintain barriers to entry. The resources spent on influencing law can be thought of as rent-seeking costs, and these are often wasteful.⁷³ Moreover, successful rent-seeking often petrifies market structures and stifles innovation. Producers who enjoy full profits from capturing surpluses are encouraged to seek regulatory approval and may have little incentive to reduce marginal costs through technological improvement.⁷⁴ For these reasons, efficiency achieved through price discrimination is inferior to the same achieved through perfect competition.

In sum, discriminatory pricing can be attractive, even if it is a second-best solution, inasmuch as it achieves efficiency and rewards investment in capital-intensive industries that require high up-front investments.⁷⁵ It is apparent that lawmakers must carefully consider the advantages and costs of price discrimination. There are alternative means of providing incentives to firms in industries with zero or declining marginal costs.⁷⁶ Most important, price discrimination is unnecessary where marginal-cost pricing will sustain a firm. There is nothing efficient about a rug merchant or car dealer engaging in price discrimination. On the other hand, the social value of serving a broad consumer base, rather than allowing the monopolist to restrict output, is easily seen with necessities such as life-saving medicines, vaccines, and clean water. These goods tend to be produced with high initial costs but then very low marginal costs. If all consumers are served with low, marginal-cost pricing, the seller might lose money and be unable to recoup those initial costs. Discriminatory pricing can thus enable greater output and access, so long as even low-income consumers are willing (and able) to pay a price at least equal to marginal cost. Ideally, other consumers will pay enough above marginal cost to finance the seller's fixed costs.⁷⁷ Note, again, that desirable price discrimination is not possible in the face of arbitrage. It is easy to see how arbitrage, or resale, is prevented for HIV treatments. In other markets, sellers might need help from the legal authorities. In any event, the larger point is that inasmuch as the seller needs to haggle – without transparency – in order to obtain desirable price discrimination, it risks creating a set of discouraged buyers and attendant inefficiency.⁷⁸ Thus, haggling may be necessary for

⁷³ See, *passim*, PHILIP P. FRICKEY & DANIEL A. FARBER, PUBLIC CHOICE: A CRITICAL INTRODUCTION (1991).

⁷⁴ W. KIP VISCUSI ET AL., ECONOMICS OF REGULATION AND ANTITRUST 570 (4th ed. 2005).

⁷⁵ J. Bradford DeLong & Lawrence H. Summers, *The 'New Economy': Background, Historical Perspective, Questions, and Speculations*, 4TH QUARTER ECON. REV. FED. RESERVE BANK KANSAS CITY 29 (2001).

⁷⁶ Price and entry regulation can force marginal-cost pricing and achieve allocative efficiency while allowing a firm to recoup an investment over time through temporary entry restrictions. VISCUSI ET AL., *supra* note 70 at 560-61. In some settings, depressed innovation can be addressed with regulatory lags that allow firms to retain cost savings from new technology until the regulator adjusts the price George Sweeney, *Adoption of Cost-Saving Innovations by a Regulated Firm*, 71 AM. ECON. REV. 437 (1981).

⁷⁷ The benefits of allocative efficiency are greater in some markets than in others. Thus, law might be more supportive of price discrimination to finance HIV treatments than to sustain a blockbuster Broadway show. The aggregate benefits are greater in the former case, and especially so when intensity or utility is judged in a manner that controls for income, or ability to pay.

⁷⁸ Returning to the discussion in Section II.C, and the insight that economists as well as lawyers have failed to notice discouraged buyers and the social cost of haggling, it is apparent that if there are very few discouraged buyers and the uniformity-or-transparency rule proposed here leads to uniformity (no price discrimination) or higher prices that discourage even more buyers, then haggling is superior to no-haggling. Conversely, if prices are already high

desirable price discrimination, so that an ironclad uniformity-or-transparency rule is ill-advised, but because haggling brings on the inefficiency associated with discouraged buyers, the number of markets where price discrimination is desirable is smaller than conventionally thought.

C. Price Discrimination and Transparency

Price discrimination can be inconsistent with transparency. This is because better information often allows a consumer who attaches a high value to a good to mimic a low-valuing consumer. Imagine, for example, that A and B are wealthier consumers, who are therefore willing to pay more for M's good, and M is able to identify such buyers and discriminate by announcing a higher price to buyers from certain zip codes, where property values are high. With transparency, these buyers will know to shop elsewhere, to misstate their zip codes, or to make their purchases through intermediaries located in less rarified zip codes.⁷⁹

In other settings, transparency does not preclude price discrimination. A public utility might discriminate, charging large commercial customers lower prices than other customers; these customers exhibit greater elasticity of demand because they can more easily set up their own generators. There is not much residential customers can do but pay the higher prices they are charged, and it is impossible for them to buy electricity from the commercial customers without detection by the utility.

D. Occasional Purchasers and Innovation

It is apparent that in a few markets price discrimination is a useful means of covering fixed costs, and because innovation often requires an upfront investment, it too can be promoted by price discrimination. It follows that a uniformity-or-transparency requirement might generate social losses that outweigh the benefits of eliminating duplicative search and discouraged buyers. The prototypical case is where a firm would be unprofitable with uniform pricing, but would manage to cover its high fixed costs if it could extract consumer surplus through price discrimination. There is good reason to enable this strategy where experience and innovation are likely to bring down costs in the future. Consider, for example, the market for commercial satellite launch services. This is hardly a market replete with consumer transactions, but it is instructive to see why transparency might be ill-advised even if our proposal were extended beyond business-to-consumer transactions. Moreover, while the buyers of satellite services are sophisticated businesses, most

under haggling because a monopolist is at work, then a switch to transparency will not drive down prices, but it will bring the non-haggling discouraged buyers to the market. The point in the text is that the first scenario seems unlikely, especially where antitrust law or public utility regulation can be counted on to control monopolies.

⁷⁹ Economists generally favor price discrimination because it encourages allocative efficiency in less than perfect markets, as illustrated in the text. Consumers' willingness to pay for a particular good or service varies, by preferences as well as wealth. By permitting producers to charge dissimilar prices, more consumers can be served. Law might prohibit price discrimination and then tax those willing to subsidize the unwilling, but it is more often the case that some amount of discrimination is allowed since taxes are imperfect and generate distortions.

are not repeat players and thus bear some resemblance to everyday consumers. In this market, transparency would surely reduce search costs, as launch prices per ton range widely, from \$11 million to \$35 million; buyers have good reason to discover what others are paying, and then to hold out and try to be the marginal, low-price customer.⁸⁰ Nontransparency, and perhaps clever auctions, help the seller identify and extract revenue from buyers with high willingness to pay. These buyers are unlikely to be discouraged by the process, which can be thought of as a form of haggling. Ideally, nondisclosure and attendant price discrimination allow the firm to survive and, eventually, to innovate and reduce costs. The same argument can be made about the production of satellites themselves, where there are also high fixed costs, room to innovate, and buyers with wildly different reservation prices.

In this and other industries where high initial investments are required, and where marginal cost is zero or constantly low, price discrimination or some form of government subsidy (or regulated price) may be essential for recouping fixed investments and efficiently scaling production. This is one rationale for intellectual property law, which rewards innovators with temporary monopolies. It is also what motivates public utility rate regulation. If transparency should make the high-valuing buyers less willing to pay higher prices than other buyers, law must allow nontransparency or be prepared to subsidize firms in the industry. Inasmuch as subsidies come with their own inefficiencies, both in terms of rent-seeking and distortionary taxes, there is good reason to favor price discrimination.⁸¹ It is for this reason that we try to leave untouched cases where price discrimination is desirable; a requirement of transparency can easily reduce a seller's ability to price discriminate.

As a practical matter, transparency does not destroy a regulated utility's ability to price discriminate. Consumers generally find it impossible to arbitrage such things as electric power and water; here the monopolist's ability to extract enough surplus to earn a fair rate of return does not even require a rule of nontransferability. If airlines do present a case where price discrimination is critical for efficiency, then it is noteworthy that we can have both transparency as well as successful price discrimination – because the legal system is willing to enforce the airline's rule against transferring tickets to another buyer. There is no first-sale doctrine, or alienability norm, that allows consumers to resell tickets they cannot use, and certainly not to buy low and sell at a medium price to fellow passengers who are at the high end of the demand curve and subject to exploitation by the airline. Thus, if the airline sells seats to children at a low price, likely because they or their families are sensitive to price, these children and their families cannot buy tickets and resell them to solo business travelers. The airline or the government authorities check that the passenger's identification matches the name on the ticket.⁸²

Unsurprisingly, the launch services industry is routinely subsidized.⁸³ Products or services

⁸⁰ Rich Smith, *How Much Does It Cost to Launch a Satellite?*, THE MOTLEY FOOL (June 24, 2016), available at: <https://www.fool.com/investing/2016/06/24/how-much-does-it-cost-to-launch-a-satellite.aspx>.

⁸¹ PINDYCK & RUBINFELD, *supra* note 8 at 409.

⁸² There are surely other ways to monitor safety.

⁸³ *See, e.g.*, VA. CODE ANN. §§ 58.1-322 and 58.1-402 (2009) (providing for no taxation on profits made from launching individuals or payloads into space); Regional Spaceport District Act, *codified at* N.M. STAT. §§ 5-16-1--5-

that exhibit high fixed cost investment and large outlays for innovation compete for capital with other industries that usually exhibit more favorable characteristics for investors. Thus, project finance industries, especially characterized by natural monopoly, will seek nondisclosure in order to facilitate cost recovery through price discrimination.⁸⁴ An exception is sport venues. The construction of a stadium requires a substantial fixed cost investment, but disclosure of the price history of ticket sales will do little to lower prices and reduce long-run efficiency in stadium building. Although concert-goers can travel short distances to see similar performances, the stadium maintains local market power, especially over a local team's fan base. The teams and stadiums do reasonably well with box seats and other means of price discrimination, in part because high-valuing buyers strongly prefer box seats over the bleachers. Still, because this price discrimination does not easily extend to fans who watch on television, upfront subsidies are needed – even if the stadium is a good social investment.⁸⁵

E. Facebook and Other Zero-Marginal-Cost Cases

Nonuniform, nontransparent pricing is common in the contemporary world of online advertising. Facebook, Google, and other important platforms, or sellers, are fueled by advertising revenue, while the advertisers (as well as users, or consumers) are unaware of the prices charged to others, and ignorant of the algorithms used by their seller. In practice, Facebook auctions off advertising spots. Buyers pay according to the traffic, or clicks, “link-clicks,” and follow-through activity they obtain, but Facebook determines the winner of each auction, based on its estimation of revenue. Facebook encourages advertisers to bid their true reservation prices by promising a kind of second-price auction; buyers bid per click (or thousand impressions) and Facebook promises that the click price will be the “maximum necessary to buy the spot,” which is roughly the bid by the second-highest bidder.⁸⁶ Inasmuch as Facebook retains control over the transaction, bidders have reason to acquire information, and there is room to reduce costs; buyers would benefit from knowing how much others are likely to bid and also from discovering or approximating Facebook's algorithm for choosing among bids. If there is evidence that advertisers indeed work to discover and compare prices bid and paid by others, then the uniformity-or-transparency proposal advanced here might be extended beyond consumer transactions so that Facebook would be required to disclose the prices paid by comparable advertisers in order to limit this inefficient

16-13 (2008) (creating a statutory source of funding for spaceport development in New Mexico); Pub. L. No. 108-428 (2004) (providing federal indemnification for third-party claims between \$500 million and \$2 billion against commercial launchers).

⁸⁴ Most natural monopolies are already subject to price and entry regulation, designed to allow them to recover costs. See *VISCUSI ET AL.*, *supra* 70 at 555-56.

⁸⁵ A matter that is much debated. See Roger G. Noll & Andrew Zimballst, *Build the Stadium, Create Jobs*, in ROGER G. NOLL & ANDREW ZIMBALLST (EDS.), *SPORTS, JOBS, AND TAXES: THE ECONOMIC IMPACT OF SPORTS TEAMS AND STADIUMS* 25 (2011) (noting that subsidies outweigh financial benefits and that city governments support stadium construction because of its intense popularity among voters).

⁸⁶ Facebook, *How Am I Charged When I Pay for Ads?*, FACEBOOK BUS., <https://www.facebook.com/business/help/614797551881954>, accessed Jul. 16, 2017.

search.

Another disclaimer concerns the importance of law not interfering with desirable innovation. It may, for example, be efficient for Facebook's own algorithm to be transparent, except that this gives information to Facebook's competitors and thus may interfere with the incentive to innovate in this evolving industry.⁸⁷ Again, note that our focus is on Facebook's sales to advertisers rather than its sales to, or extractions from, individual consumers, or Facebook friends, because at present the former but not the latter are likely to be wasting resources in duplicative searches.

The immediate question is whether Facebook's (and other platforms') nontransparent pricing is part of a desirable price-discrimination scheme that is well worth the cost of some duplicative searching by advertisers. If the price discrimination simply reflects a means of metering usage, then buyers have no reason to search, and indeed pricing may as well be transparent if not uniform. It would not be efficient to require uniform pricing – in this case for Facebook to announce the per click price for a given placement – because buyers place different value on particular spots, and Facebook has a limited number of such spots. It may also be unwise to require a strict second price auction. One advertiser may be indifferent between advertising on two sports news feeds, while another may only want to pay for an ad near a segment about a Chicago sports team. On such matters, the advertiser has more information than Facebook, and so the latter extracts the information with an auction. In some media, a uniform price per viewer (or click equivalent) is good enough. For example, a television network charges according to expected viewership, with a premium for viewers that are otherwise hard to reach. A minute during the Super Bowl is famously expensive, and the first minute before kickoff is more expensive than one in the middle of the third quarter. These differences are allocatively efficient in the sense of assigning the highest-valued time to the party willing to pay the most. The marginal cost of producing the extra viewers is close to zero. In this setting, price discrimination is efficient, though it is probably better understood as product differentiation, with the better products going to those willing to pay more for them. In both cases, transparency hurts no one; Facebook and the Super Bowl network have nothing to fear from arbitrage so long as they extract high payments for the most desirable spots. In the Facebook case, there may be nontransparency both with respect to the prices paid by other advertisers and with respect to some of the characteristics of the viewing audience that Facebook discovers but does not entirely share. Given Facebook's ability to price discriminate with transparent pricing, by segmenting its user base, it would be surprising if our proposal (even if applied to these nonconsumer transactions) destroyed its business model. Facebook can segment end-users by offering advertisers different prices based on demographic characteristics of the audience. It can also segment the advertisers, charging prices that take into

⁸⁷ For instance, Facebook has recently developed automated messaging “chatbots” to interact with its users and mine additional data to enhance the precision of its algorithmic advertising. Madhumita Murgia, *Facebook Messenger's New Bots Are a Powerful Way to Target Adverts*, THE TELEGRAPH, April 13, 2016, available at <http://www.telegraph.co.uk/technology/2016/04/12/facebook-messenger-launches-chat-bot-economy-to-take-on-apps/>. If competitors could simply use the algorithm, then Facebook might have less incentive to develop and strengthen its capabilities.

account the alternative media available to disparate advertisers.

Moreover, Facebook has other ways to extract revenue in the event of a requirement of transparency, or even of uniform pricing. It might offer uniform prices, but charge for market research. The more an advertiser wants to know about the audience, the higher the cost. More important, however, is the observation that legal intervention – and not just of the kind proposed here – might push Facebook into an altogether different business model. It could join Netflix and cable television in adopting a subscription model, with little or no advertising. The subscriptions could themselves involve some metering, or low-level price discrimination, even if there were a transparency or uniformity requirement. At present, Facebook hesitates to charge users directly because of the fear that users – its major business asset – will migrate in large numbers to another platform, much as Facebook once benefited when users of Myspace left that market-leading competitor.⁸⁸ If, however, users perceived that law rather than corporate greed pushed Facebook from an advertising to a subscription model, they might not jump ship, especially if offered a choice between the status quo, with some extraction of information, and a monthly fee to be free of most or all advertising. Note that a subscription model would hardly reflect marginal-cost pricing. Indeed, from an efficiency perspective, the current business model is more attractive than the subscription alternative. While there is no production cost associated with the marginal advertiser, prices – and even auctions – are suitable means of allocating the scarce resource of screen space (that typical users will tolerate and to which they will best respond). In this respect, Netflix seems more inefficient than Facebook.⁸⁹

In short, if there is an inefficiency associated with Facebook and other online providers, it is the duplicative searching that advertisers undertake as they bargain for better advertising rates. It appears that Facebook could provide enough information to make such searching unnecessary, and that it could do so without destroying its business model. If a transparency requirement did nudge Facebook to a subscription model, it is plausible that this would be especially desirable – though surely unpopular with Facebook users – but this conclusion depends on the volume of duplicative searching that advertisers engage in at present, as they try to bid strategically in the face of Facebook’s hidden auction algorithm.

⁸⁸ We set aside the popular, or populist, idea that Facebook should pay users, depending on the value of information extracted from them. The idea must be motivated by a sense that many users would provide more useful information if they were paid. See JARON LANIER, *WHO OWNS THE FUTURE?* 1 (2014). On Myspace, see Matthew Garrahan, *The Rise and Fall of Myspace*, *FINANCIAL TIMES: FT MAGAZINE* (Dec. 4, 2009). Note that the information problems discussed here cast doubt on the market’s ability to pay the right price for user-supplied information. Facebook and Google know what the information is worth, while individuals do not; neither transparency nor uniformity will fix this problem.

⁸⁹ The counterargument, as noted in note 84 above, is that users are providing information about themselves without compensation and that there might be more useful information if people were paid for its provision. A subscription model that gave a discounted rate, or zero rate, to those who agreed to have their information mined and exploited, might be attractive. Of course, that is a way of describing the current regime in which participants are “paid” with social media usage in return for providing information. Note that some internet-based services, like Hulu and various music sites, offer a menu, so that the customer can pay for levels of an advertising-free experience.

F. Compulsory Licenses in Copyright Law

The idea that zero-marginal-cost producers could be financed with subscription fees that are uniform or transparent – with or without a price-discrimination feature – is something rarely seen in the regulation of public utilities, but it does offer a novel way of thinking about and evaluating important parts of Copyright law. There was a time when regulated water companies charged a flat fee per household; over time, water conservation brought on metering.⁹⁰ Electric utilities might also have suggested and been allowed to use uniform subscription rates for household service, but with no incentive to conserve, utilities would have needed larger power plants. Marginal costs are positive, if lumpy. An alternative perspective is that even with zero marginal cost, there is a need to allocate electricity (or water) during peak times, and it is efficient to do so according to willingness to pay. The analysis is remarkably similar to that applied above to Facebook advertisements. The computer screen, or user attention span, can be thought of as a lumpy marginal cost or, from a different angle, nonuniform prices can be understood as a means of allocating the available scarce resource among many interested advertisers.

Where intellectual property is concerned, it is again the case that marginal cost is often zero. The creator of a song or novel needs to be rewarded in order for society to encourage the original production, but there is often no marginal cost associated with sharing the created work with new users. This is easiest to see when the novel or song is experienced online; the marginal audience member imposes no cost on the creator, as the work is already there to be enjoyed. As with public utilities, the government could subsidize the upfront costs of production or – here it would be encouraging the creation of the work – with prizes or fixed payments of some kind. But most legal systems have chosen to give the creator, or copyright holder, a monopoly, so that an expected stream of royalties is the creator's reward. In some cases this monopoly position generates an obvious allocative inefficiency, but it is plausible that in most cases competition from other works drives the royalty (or retail price) down, though hardly all the way to the marginal cost of production and distribution. The inefficiency is thus less than what would be experienced under a true monopolist. If iTunes charges \$1 for a download, that is \$1 more than marginal cost, and there is deadweight loss because of potential audience members who would enjoy the work only if it were available at 25 cents, say. On the other hand, \$1 is much less than what the most popular star of the day could charge, and certainly less than what a music company would charge for that artist's work if it controlled all new music.

Copyright law has increasingly relied on – or been driven by interest group pressure to – compulsory licenses, and the argument in this section is that these licenses provide transparency and reduce transaction costs in a manner that is remarkably like our proposal. We do not extend our proposal to Copyright,⁹¹ but rather suggest that Copyright demonstrates that something akin

⁹⁰ See Sylvestre Gaudin, *Effect of Price Information on Residential Water Demand*, 38 APPLIED ECONOMICS 383, 386 (2006).

⁹¹ Most books, music, and films are, in any event, sold in transparent markets. And where bargaining is found, it is rare for consumer transactions to be at stake.

to our proposal is already flourishing, though not exactly with respect to consumer transactions. Consider, for example, the oldest and most straightforward compulsory license in Copyright. Once a nondramatic musical work is distributed to the public, anyone can negotiate with the copyright holder for a license to make another recording of the work and to sell it to the public. The negotiation would seem to be in the shadow of the copyright holder's right of reproduction, adaptation, and distribution. But for more than a hundred years now, the latecomer who seeks to make a new recording, or "cover" the song, can avoid negotiation and simply give notice and pay a statutory royalty, determined (presently) by the Copyright Royalty Board.⁹² The royalty is compulsory in the sense that the copyright holder cannot hold out or refuse to license the interested party, and it is "mechanical" in the sense that there is no need for negotiation. It is not, however, exclusive; the copyright holder may perceive that the statutory rate is too high, and that it would make more profit with a lower price. It is free to negotiate a lower rate. It may do so in a way that imitates or supplants the mechanical license by using an intermediary, such as the Harry Fox Agency, which specializes in these rights.⁹³ The statutory rate is a ceiling under which licensees might find a better (also mechanical) rate through the Agency, and even that might be improved upon by negotiation.

By most accounts the impetus for the original statutory scheme, in 1909, was the fear of monopoly power on the part of music publishing companies.⁹⁴ To be sure, copyright itself is a monopoly grant, but the idea is that most of these "monopolies" must compete with other music; if all popular music is controlled by a very few owners, then "true" monopoly prices might emerge, and many consumers would be excluded from the market, despite the low marginal cost of production and distribution. Over time, the efficiency of the compulsory license has had less to do with monopoly power and more to do with reducing transaction costs. The user who wants to cover a song does not need to negotiate, does not need to learn what others have paid for similar rights, and does not need to worry that the copyright owner will out-haggle and price discriminate. In all these ways, the compulsory license does for creative works just what our proposal does for consumer transactions in various markets. We are not suggesting that prices, or even price ceilings, be set in the manner of the compulsory license. Our push is for transparency or uniformity – though of course that is in large part what the compulsory license does as well. Put differently, the Copyright statute⁹⁵ could have required the copyright owner of a musical work to file a price list, or state a single royalty per record, that all subsequent copiers could pay in the manner of early common carriers. This too would limit transaction costs. It is likely that the original statute did not follow this path because it was as concerned with the monopoly power of music companies as with

⁹² See 17 U.S.C. § 801(b)(1) (2012) (providing that the Copyright Royalty Board shall "make determinations and adjustments of reasonable terms and rates of royalty payments").

⁹³ Harry Fox Agency, *What Does HFA Do?*, https://www.harryfox.com/publishers/what_does_hfa_do.html, accessed Jul. 16, 2017.

⁹⁴ See Scott L. Bach, Note, *Music Recording, Publishing, and Compulsory Licenses: Toward a Consistent Copyright Law*, 14 HOFSTRA L. REV. 379, 389 n.60 (1986).

⁹⁵ 17 U.S.C. § 115 (2012).

transaction costs.⁹⁶

The various compulsory licenses that have evolved in Copyright impact many parties and rights, and they are easy to criticize because they are building blocks of an awfully complicated system.⁹⁷ Moreover, some if not all these statutory licenses are plainly the product of interest group pressures. Indeed, Copyright law writ large can be understood as an ongoing battle among interest groups, rather than a cohesive, well-worked out statutory scheme. The skirmishes are unattractive not only because of the rent-seeking by interest groups, but also because consumers, and perhaps some subsets of artists and authors, are generally dispersed and disadvantaged in the political arena. Such laws should rarely be held up as examples of efficient lawmaking. But here we do not point to the prices or royalties set out in the statutory schemes as exemplars, but rather aim to show that the structure and very existence of these compulsory licenses comport with the notion of saving transaction costs where marginal costs are low. That these compulsory licenses have survived through many iterations of the Copyright statute is a further clue as to their desirability.

In short, there are markets where the social waste we have associated with nonuniform pricing and even the negotiation process itself is likely more than offset by the gains in allocative and dynamic efficiency from allowing sellers to price discriminate. This discussion in this Part has encouraged caution in jumping to this conclusion for any particular market. Transparent and even uniform pricing does not necessarily rule out price discrimination.⁹⁸

But how exactly should lawmakers discern when the inefficiency of duplicative search (and discouraged buyers) is great enough to justify the uniformity-or-transparency requirement? We have suggested that automobile dealerships, law school admissions offices, rug merchants, and even hospitals and Facebook (and other online sellers of advertising space) might meet the requirements for a uniformity-or-transparency rule. Each case supposes that any reduction in the ability to price discriminate by these sellers will insufficiently impact efficiency, so that any costs generated by transparency will be offset by the benefits of eliminating duplicative search. Allocative efficiency remains largely in place because marginal costs are either increasing or flat; long run efficiency remains unaffected because the sellers in these examples can recover their fixed-cost investments in new innovations. In addition, to the extent that transparency increases differentiation, it can promote innovation and enhance consumer satisfaction.⁹⁹ Only when price discrimination is essential, and differentiation not feasible, should an exception be made, and nontransparent negotiations allowed in these business-to-consumer sales.

⁹⁶ See Jane C. Ginsburg, *Creation and Commercial Value: Copyright Protection of Works of Information*, 90 COLUM. L. REV. 1865, 1925-26 (1990).

⁹⁷ See, e.g., LESSIG, *supra* note 56 at 109-10.

⁹⁸ For example, airlines are able to price discriminate because they can make airline tickers nontransferable. This alone hardly means that such price discrimination is desirable.

⁹⁹ See VISCUSI, ET AL., *supra* 70 at 569 (noting differentiation as a source of nonprice competition where firms invest in innovations to offer improved products). *But cf.* Richard Schmalensee, *Entry Deterrence in the Ready-to-Eat Breakfast Cereals Industry*, 9 BELL J. ECON. 378 (1978) (incumbents will offer new brands to fill market niches in order to raise barriers to profitable entry).

V. PATHS TO TRANSPARENCY

The obvious way to gain transparency in consumer transactions is through legislative action or administrative regulation. The Fair Packaging and Labeling Act (FPLA), enacted in 1967, already instructs the Federal Trade Commission and the Food and Drug Administration to issue regulations requiring that all "consumer commodities" be labeled to disclose net contents, identity of commodity, and name and place of business of the product's manufacturer, packer, or distributor. The Act authorizes additional regulations where necessary to prevent consumer deception (or to facilitate value comparisons) with respect to descriptions of ingredients, slack fill of packages, use of "cents-off" or lower price labeling, or characterization of package sizes.¹⁰⁰ By its own terms, the purpose of the FPLA is to facilitate value comparisons and to prevent deception. Many products that are exempt from the FPLA nevertheless fall within the purview of the Weights and Measures laws of individual states.¹⁰¹ Similarly, the FDA requires that labels on foodstuffs list ingredients, and newer legislation requires GMO information.¹⁰² A variety of other laws and regulations require or control labels; tobacco warnings and information about kosher products are but two examples.¹⁰³

Presumably, these labeling requirements do not include price information because merchants are permitted to change prices over time, and also to negotiate with buyers at any given time. There are, as we have noted, various laws that require prices to be posted, and even some that require unit pricing for some goods.¹⁰⁴ New legislation or administrative action is required for two reasons. First, not all consumer goods and services are covered in these disparate statutes. For example, law firm services are not household goods, and there are no state and federal requirements regarding the publication of hourly or other rates. A law firm that affirmatively misled clients about its prices could be subject to a fraud claim, and something short of that might trigger a deceptive-practices claim, but for the most part the pricing of services is unregulated.

More important, even where there is a requirement that prices be posted, consumers need not only current price information, but also information about recent transactions. That is especially the case where prices are negotiable. The necessary change, or experiment, could come about as a matter of state or federal action, on grounds that it reduces deceptive practices, or it

¹⁰⁰ See 15 U.S.C. 39 § 1454 (c) (2012).

¹⁰¹ The Office of Weights and Measures of the National Institute of Standards and Technology, U.S. Department of Commerce, is authorized to promote to the greatest practicable extent uniformity in State and Federal regulation of the labeling of consumer commodities. See NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, UNIFORM LAWS AND REGULATIONS IN THE AREAS OF LEGAL METROLOGY AND ENGINE FUEL QUALITY 5-9 (2017).

¹⁰² See 7 U.S.C. § 1639b (2012) (establishing national bioengineered food disclosure standard); *Alliance for Bio-Integrity v. Shalala*, 116 F. Supp. 2d 166, 178-79 (D. D.C. 2000) (upholding FDA position that bioengineered food was not especially dangerous and in need of identification, though voluntary labeling must be truthful). State laws in Alaska, Connecticut, Maine, and Vermont require GMO disclosure on labeling. See AS § 17.20.040, C.G.S.A. § 21a-92c, 22 M.R.S.A. § 2593, and 9 V.S.A. § 3043, respectively.

¹⁰³ For cigarette labeling and advertising, see 15 U.S.C. § 1333 (2012). For kosher food and products, see, e.g., NY Agriculture and Markets Law § 201-a (2014).

¹⁰⁴ *Supra* note 70.

might be accomplished in wholesale fashion through a new statute. There is something to be said for experimentation at the state or even local level.

An alternative path to transparency is the common law. Much as courts have granted rescission and other remedies in the event of nondisclosure of some material (and especially unsafe) conditions, as noted in Section III.G, they might do the same when comparative price information was not forthcoming. This seems unlikely because of the long history of haggling with asymmetric information, but it is not impossible.¹⁰⁵ Even a very few successful lawsuits might lead legislatures to act – if only to limit the reach of the common law – or might lead sellers in a variety of industries to disclose current and past prices. The same could be true for commercial buyers from consumers, including purchasers of used textbooks, used vehicles, and employers (purchasing labor from employees). In these markets, the inexperienced party is the seller rather than the buyer.

Finally, and most interesting, is the possibility that practices change without any formal lawmaking. Consumers could simply ask sellers for information about comparable transactions. Imagine, for example, that potential buyers at automobile dealerships regularly asked for a list of prices in recently completed transactions for the same model vehicle. The seller could decline, but if enough buyers began to take this disinclination as a sign of a disadvantageous information asymmetry, other dealers might begin to answer the question. Conventional fraud law prevents a dealer from responding with false information.

Consumers might begin to ask for this information because they are encouraged by consumer-oriented websites and personal algorithmic shopping assistants, or because some dealers try to gain a competitive edge by supplying this information freely as a means of competing with internet sales and rival shopping technologies. As voluntary openness takes hold in one industry, it will increasingly spread to others inasmuch as markets overlap. In turn, as the evolution of face-to-face transactions transpires, online sellers might develop a comparable and competitive disclosure style. Once disclosure of this sort is found in some industries, or on the part of many sellers in several industries, it is easier for law to turn a practice into a legal requirement, and also to expand the reach to all consumer transactions. Some sellers might pressure legislatures to regulate in this manner in order to level their playing field. It is noteworthy that many familiar labeling requirements began as voluntary or strategic practices on the part of some sellers.¹⁰⁶ We suggest that conventional sellers will be pressured by the increasing digitization of sales, and the open and transparent pricing which characterizes sophisticated algorithmic shopping.

In some ways, this third, voluntary path is the most attractive, even if it takes time to evolve, inasmuch as it side-steps the costs of implementing new policy. The economic case for change is

¹⁰⁵ Consider that courts may apply mistake doctrine to void contracts where one party is ignorant of information that merely serves to redistribute surplus between bargaining parties. See Anthony T. Kronman, *Mistake, Disclosure, Information, and the Law of Contracts*, 7 J. LEGAL. STUD. 1, 9 (1978) (suggesting that the court in *Laidlaw v. Organ*, 15 U.S. (2 Wheat.) 178, voided a contract because defendant's superior knowledge of price was happenstance and not the outcome of a socially productive search).

¹⁰⁶ See, e.g., Gerald F. Masoudi, *Kosher Food Regulation and the Religion Clauses of the First Amendment*, 60 U. CHI. L. REV. 667, 671 (1993) (describing how seller practices led to New York regulation of Kosher products).

based on the inefficiency of duplicative search, the inefficiency brought about when buyers are disinclined to haggle, and perhaps also the disparate impact of haggling.¹⁰⁷ These reasons ought to be enough to cause some of us, as consumers, to begin asking for information about completed transactions and their prices. When shopping in a showroom, for instance, it is not so difficult to inquire, “At what prices did you sell this item in the last thirty days?” much the same way that algorithms can process vast price histories and suggest a price to an online seller on behalf of a sophisticated buyer who uses data-driven shopping applications. Consumers who have little haggling experience, and are aware that they do not recognize the occasional negotiability of prices, may be especially inclined to require disclosures. This is especially so if they are educated by internet sites and digital shopping assistants to beware that some merchants’ prices are set with haggling potential in mind.

¹⁰⁷ *Supra* Parts IV-V.