The History and Future of Pricing

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1 Why study the "history of pricing"?

Santayana's injunction that "Those who cannot remember history are condemned to repeat it," is often used as a justification for studying the history of some recondite topic. When it comes to the history of pricing, Faulkner's observation that "The past is not dead. In fact, it's not even past" is more appropriate. After all, pricing managers who are ignorant of the history of pricing are in little danger of reverting to barter. However, they may insufficiently appreciate the extent to which the way that prices are set, communicated, negotiated (or not), and evaluated in their markets are the result of history. The pricing activities in a market are not ahistoric and fixed, but are historically determined and dynamic. The way a particular market operates right now is not a snapshot, but a frame in a motion picture. Furthermore, the processes, organization, technologies, and techniques that an organization uses to manage its prices can either enable or hinder its ability to adapt to changing market conditions. At the very least, some familiarity with the history of pricing can engender a healthy appreciation of the potential for future change and the need to be ready for it.

This chapter introduces the concept of a *pricing modality*. By pricing modality, I refer to the way that buyers and sellers interact in order to determine prices in a market. In the terms of Mark Granovetter (1992), prices themselves are an "outcome" while a pricing modality is an "institution". Depending upon the situation, a pricing modality can either be a particular instance of an economic institution or part of a larger economic institution (e.g. a "market structure"). Some examples of pricing modalities include:

- *Fixed Pricing.* A seller chooses a price. That price is posted in a market. The item for sale (product or service) is available at that price to all buyers in the market.

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- *Bargaining.* Price is negotiated between an individual buyer and a seller. The "price" is the final point of agreement – assuming that agreement is reached.
- *Dictatorship.* A government or state agency chooses and enforces prices.
- *Seller Auction.* A seller accepts bids from two or more potential buyers. Buyers may or may not be allowed to update their offers. The ultimate price is determined by the seller's choice of buyer but may also depend on the other bids as well.
- *Customized Pricing.* A potential buyer solicits offers or bids from potential suppliers, often through a "Request for Proposal" or "Request for Quote" process. The price results from the buyer's choice of which bid to accept.
- *Contingent Pricing.* The buyer and seller agree on a table of prices or pricing formula that determines the final price based on some uncertain future outcomes.

A pricing modality describes the "rules of the game" in a given market. These rules are understood by all buyers, sellers and intermediaries as well as by outside observers such as reporters, regulators and stock analysts. In some cases, the predominant modality may be mandated by regulation, but more often it is simply a matter of custom or common understanding among all parties.

A major motivation for this article is the author's experience that pricing in most industries is a messy business, with great variation among industries and even among different companies within the same industry. In many cases, only insiders fully appreciate the subtleties of how prices are set, communicated, evaluated and updated within their industry. Sections x to y in this volume describe the pricing modalities in use within several industries. Even a brief perusal of these sections should give an impression of the great variation among pricing modalities in use. In many cases, industries that seem superficially very similar operate under very different pricing modalities. This raises a number of questions: Why do certain pricing modalities prevail in certain markets and industries? Why are prices set using a different modalities in markets that appear to be very similar? How do prevailing market modalities influence how people think about prices? How do they influence what people consider "fair" or "unfair" in economic transactions?

This section does not aim to answer all of these questions. However I hope it establishes a number of points. The first is that the pricing modality in use in a particular market cannot be understood purely by reference to principles of economic optimality. Pricing modalities are neither ahistoric nor asocial – understanding history and the broader social setting is often necessary to understand why a particular pricing modality is in place in a particular market at a particular time. Secondly, over time, pricing modalities tend to become normative for all participants – buyers, sellers, and intermediaries. An attempt by any player to unilaterally deviate from the norm may not succeed even if it would lead to an improved situation for all participants. Finally, the fact that pricing modalities have a past means that they can also have a future. That is, the pricing modality in use in a particular market can shift due to changes in technology, regulatory environment or social and demographic characteristics. When this happens, incumbents who are heavily invested in the previous modality may find themselves at a relative disadvantage.

In the next section I discuss three different approaches to explaining and understanding the reasons why particular modalities hold in particular markets. The next two sections discuss two markets – pricing for television advertising and pricing of movie tickets in the United States – in which arguments from economic equilibrium cannot fully explain the predominant pricing modalities. The next section discusses the rise of fixed pricing as the dominant modality for retail transactions. This history is interesting because of the extent to which fixed pricing has become the standard for "fairness" in retail pricing. The final section summarizes the main points.

2 Approaches to Pricing Modalities

Painting with a very broad brush, there are three pure approaches used to explain the use of a particular pricing modality within a particular market:

- The *market equilibrium* approach analyzes economic institutions strictly in terms of the incentives and information of the players (buyers, sellers, and intermediaries); the nature of the goods and services being sold; and the regulatory and technological environment in place. Given this, it seeks to show that a particular pricing modality is the (ideally unique) of the underlying game.
- *Institutional history* looks at economic institutions as the outcome of historical development involving the interplay among changing technologies, regulations, players, and industry structures. This viewpoint emphasizes the role of the past in determining the pricing modality currently used in a particular market.
- *Economic sociology* emphasizes the roles of social structures, norms, expectations, and the extent and nature of social ties in determining the form of economic institutions.

In the next three sections, we will briefly discuss each of these three pure approaches.

2.1 Market Equilibrium

The basis of the market equilibrium approach is based on the assumption that the pricing modality currently in place in a market can be determined entirely from consideration of the players(buyers, sellers, and intermediaries) in that market, their preferences, the information available to each player and how it is revealed over time, the distribution technology, the characteristics of the product or service for sale, and the regulatory environment. Three examples of this approach include:

- In a pioneering and classic example of game-theoretic analysis, Bertrand (1883) argued that competitive pressures would force sellers of identical goods to set their margins to zero so that prices equaled marginal costs.

- Riley and Zeckhauser (1983) used a mathematical model to show that a seller encountering risk-neutral buyers should quote a fixed price rather than bargain or use a randomized pricing strategy. They showed that this holds whether or not the seller knows the distribution of willingness-to-pay within the buyer population.

- Lazear (1986) considered the case of a seller holding a fixed stock of a good whose value to customers is highly uncertain – for example, a dress at the start of the spring season. He shows that the optimal policy for such a seller is to start initially with a high price which he should then sequentially lower until the entire stock is sold. This corresponds to the "markdown policy" commonly used by sellers of fashion goods (Phillips 2005, Chapter 10).

- Dana (1998) showed how the advance purchase discount policy adopted by airlines, rental cars, and other related industries can be derived from a model in which customers have uncertain demand for the service. This result holds even in the absence of market power on the part of the seller.

These are just four examples among many – the argument from market equilibrium is, to a large extent, the defining characteristic of modern economics. Economists employ a range of analytic tools to establish market equilibria – and, thereby, pricing modalities. For one example, the "no arbitrage" principle provides a limit to the extent to which a market can support price discrimination. For another, the assumption of profit-maximizing sellers and utility-maximizing buyers interacting with different endowments and different levels of information, often enables a set of possible equilibria to be determined as the set of joint solutions to mathematical optimization problems.

It is unquestionable that the neoclassical approach has been extremely successful in providing insights into the structure of markets. To name just one example, it was long believed – by many retailers among others – that the need to mark down unsold inventory was solely the result of mistakes in buying, merchandising, or pricing. For example, a pamphlet issued to managers at a leading San Francisco Department store entitled "How to Avoid Wasteful Markdowns" (Emporium 1952) warned:

> High markdowns benefit no one. Not the store. Not the manufacturer. Not the customer. The store loses in value of assets or inventory. The manufacturer loses in future sales and by loss of prestige of his product. The customer is getting merchandise that is not up to standard, at a low price it is true, but, remember – she would rather have fresh, new merchandise that she can be proud of and with real value at regular price than pay less for questionable merchandise (The Emporium 1952).

Economic analyses such as that by Lazear (1986) has helped retailers understand that, far from being evidence of mismanagement, markdowns can be an effective and profitable way to manage sales of seasonal merchandise. [1]

Game theory has proven to be a particularly important tool for analyzing markets. The demonstration that a pricing modality or pricing pattern is a unique pure-strategy Nash equilibrium is a powerful result. It means that, under the current modality, no player (buyer, seller, or intermediary) could unilaterally do better by changing his behavior. This is a strong explanation for the persistence of a particular modality over time. Furthermore, in many cases, it can be shown that a sequence of "best response" moves will lead to the equilibrium. This is a potential explanation for the origin of the modality – players playing their "best move" in response to what every one else did would ultimately find themselves in equilibrium.

However, game theory as a predictor of market structure has a number of well-known drawbacks. First of all, a one-shot game may have multiple pure Nash equilibria. In this case, it is difficult to predict which equilibrium would prevail. Worse still is the case of games that admit only mixed-strategy Nash equilibria. For large games (those with many players and/or many possible actions), the computation of all Nash equilibria is computationally difficult (Papadimitrou 2007). It is not clear how sellers would have access to the computational power needed to calculate the mixed-strategy solution that can arise, for example, in the case of a finite number of capacity-constrained Bertrand-Edgeworth oligopolists (Allen and Hellwig, 1986). And, even if players had access to sufficient computational power, there is no universally agreed theory of what would happen in a one-shot game that admitted only mixed-strategy equilibria.

A further challenge to the use of game theory in predicting market outcomes has come from the field of experimental economics – in particular, the finding that, in many experimental situations, the observed outcome does not correspond to a Nash equilibrium, even in extremely simple two-player games. The classic example is the "ultimatum game" in which one player (the "Proposer") is given a sum of money and proposes a split of the money to a second player (the "Responder") who decides whether or not to accept the proposed split. If the Responder accepts, than each player receives the proposed split. If the Responder rejects the proposed split than both players receive nothing. The unique Nash equilibrium for this game is for the Proposer to propose the smallest possible amount to the Responder and for the Responder to accept. However, Fehr and Schmidt (1999) found that in more than 70 percent of games, the Proposer offered between 40 and 50 percent to the Responder. Furthermore, Proposers routinely rejected offers of 10 to 20 percent of the money. In almost all ultimatum game experiments, either the Proposer or the Responder (and sometimes both) play a strategy that is strongly dominated in the game theoretic sense – the Proposer by proposing to give away more than the minimum, the Responder by rejecting

[1] For a full discussion of this point see (Phillips 2005, Chapter 10).

positive offers. These results have been replicated in a wide variety of settings (Camerer 2003, 48-59, Henrich et. al. 2001). While there are substantial variations between cultures, deviation from Nash equilibrium appears to be the rule rather than the exception. Experimental economists have found deviations from "optimal play" in a many other types of game (Camerer 2003). The implications and interpretations of the deviations from optimality found by behavioral economists can be controversial[2] but it is increasingly apparent that arguments from game theory need to be used with great care. Experimental economics has shown that a Nash equilibrium may be neither descriptive nor reliably normative for a particular market.

2.2 Institutional History

Douglass North, in the first page of his book, *Institutions, Institutional Change and Economic Performance* (1990) asserts that neoclassical economics cannot explain the origin and persistence of many economic institutions.

> ... (neoclassical economics) does not provide much insight into such organizations as the medieval manor, the Champagne fairs, or the suq (the bazaar market that characterizes much of the Middle East and North Africa). Not only does it not characterize these organizations' exchange processes very well, it does not explain the persistence for millenia of what appear to be very inefficient forms of exchange (pg. 11).

North, and other institutional historians, seek to trace the origin, development, and persistence of economic institutions over time in terms of social change. They view arguments from pure economic equilibrium approaches as having insufficient explanatory power because they take for granted much of what needs to be explained. "Asserting that a particular game is an equilibrium outcome in a larger meta-game whose reflect only the attributes of the available technology and the physical world is useful yet unsatisfactory, because it simply pushes the question of institutional origin back one step. What is the origin of the meta-game?" (Greif 2006; 11) Institutional historians seek to supplement (rather than replace) economic analysis with the understanding of an economic institution as the outcome of an evolutionary process

If understanding history is necessary, then the rationale for an existing pricing modality cannot be entirely explained from current conditions. The implication is that: if history were different, then the present would be different. This is the definition of *historical contingency* – an existing economic institution has the form it does, it least in part, because of past events and cannot be fully explained without reference to history. If history needs to be evoked to explain the present, then the final form of the institution cannot be "optimal" with respect to current conditions. This idea is very similar to the concept of *path-dependence* that was introduced by Paul David (David

[2]See, for example, the commentaries and responses in Henrich et al. (2005).

1985). Specifically, David was interested in how an apparently sub-optimal standard could become dominant over a very large market even in the presence of a superior alternative. The particular example that he evoked was the *QWERTY* keyboard layout.

QWERTY – named for the sequence of the first six keys on the upper left side of the keyboard – is the name given to the most common keyboard layout for mechanical devices. It was by far the prevalent layout for typewriters and is still the dominant layout for computer keyboards, PDA's, cell-phones, Blackberries and so on. The QWERTY layout was originally designed by the American Christopher Sholes and adopted in its current form by the Remington Corporation in 1874. QWERTY is evidently inefficient since three of the four most common English letters (E, T, and A) are allocated to the weaker left hand. According to David (1985), this was a conscious decision on the part of early typewriter designers to slow typists down in order to keep the keys from jamming.

The Remington was the first commercial typewriter available in America and the fact that it had a QWERTY layout set the course for the future:

> QWERTYs early dominance meant that typewriter users became committed to the layout. From 1874 to 1881, the only typewriters commercially available were Remington machines with QWERTY keyboards, and typists learned to use them. Some of those typists set up typing schools, where they taught the QWERTY keyboard familiar to them. Their pupils took jobs at offices with the keyboards they knew. Many business newly equipping themselves with typewriters ordered QWERTY machines, because it was easy to find typists trained to operate them (Diamond 1997, 5).

Over time, the design of typewriters evolved so that key jamming was no longer a limiting factor on typing speed yet QWERTY remained dominant. In 1932, William Dealey and August Dvorak introduced a new layout - the so-called Dvorak keyboard - which had been designed to make typing both faster and less fatiguing. Navy tests showed that retraining QWERTY typists to Dvorak increased their accuracy by 68% and their speed by 74% (Diamond 1997).

Nonetheless, despite its evident superiority, the Dvorak typewriter did not displace QWERTY. Interested parties including manufacturers, typists, and typing schools simply had too much invested in the status quo to change. As a result, David argues that a "sub-optimal" technology continues to dominate the market, even though a superior technology has been available for many years.[3]

[3]Both the specifics of the triumph of the QWERTY keyboard over the Dvorak and the concept of path-dependence have been strongly contested. In Lewin (2003), Liebowitz and Margolis argue that the Navy tests were biased in favor of Dvorak and that there is no firm evidence that the Dvorak keyboard is actually superior to the QWERTY keyboard. They go on to argue that path-dependence – at least in the sense that David defined it – does not play an important role in the evolution of economic institutions. See David (1997, 1999) for his response.

While the QWERTY example remains somewhat controversial, there is no question that there are many examples of customs and standards in which path-dependence clearly plays a role. Examples include left-hand driving in the UK versus right-hand driving in the US; the varying width or "gauge" of railroad tracks in different countries; 110 volt electric power in the US versus 220 volt power most other places; etc. The existence of, for example, different power plug configurations among different countries, is explainable in terms of path dependence from independent decisions made early in the development of the electric power distribution industry in each country rather than the fact that a different plug-configuration is somehow optimal in Italy than in England. Thus, at some level, any meaningful controversy is not about the existence of "path-dependent" institutions, but rather the extent to which suboptimal institutions can long persist when superior alternatives are available.

In the cases noted above, it is likely conditions of "economic optimality" would predict that players would agree on a standard in order to enable a coordinated equilibrium although the particular standard chosen can only be explained by history. Traffic lights provide an excellent example – the value of a "coordinated equilibrium" over all possible non-coordinated equilibria is sufficiently high for all players (drivers) that the rise of some coordination mechanism seems inevitable (Tardos and Vazirani: 2007, pp. 14-15.) However, the widespread adoption of stop lights with "green means go", "amber means caution", and "red means stop" rather than, say "blue means stop" while "white means go", is only explainable by reference to details of technological and institutional history.

The larger issue is the extent to when differences matter. If the difference in economic efficiency between two equilibria is small or non-existent, than outside intervention may not be justified. But, if one equilibrium is much less efficient than the other, the argument for government intervention is much stronger. Much of the controversy surrounding the concept of path-dependency centers on the implications for public policy – when is government justified in intervening to prevent a "sub-optimal" structure from prevailing? Liebowitz and Margolis (2003) argue that path-dependence in its purest form does not occur and therefore cannot be used as a justification for government intervention in market design.

Both the "path-dependence" approach and economic sociology view the structure of economic institutions as historically contingent. The difference between them is one of emphasis. The sociologist might seek to explain the differences in traffic control methods in the US versus the UK in terms of differences in societal norms or social structures and power hierarchies between the two countries.

2.3 Economic Sociology

The market optimality approach is asocial in the sense that it makes no reference to any sphere of social interaction or normative behavior among the parties except as manifest in their preferences and externally imposed regulations. Economic sociologists claim that the core models of economics are overly simplistic and reductive in that they are built around the assumption of economic individualism. This ignores the fact that the set of activities defined and labeled as "economic" is, in fact, part of a larger social structure. The sociologist Mark Granovetter noted that economic actions are "embedded in concrete, ongoing systems of social relations" (Granovetter, 1985: 487). Economic sociology emphasizes the "social embeddedness" of the economy. Granovetter and other economic sociologists emphasize that economic transactions are merely a particular type of social interaction and the modes of economic interaction within a society, the institutions that are built around economic activities and, the allowable sets of outcomes are strongly mediated by broader social factors. To the extent that this is true, an economic institution cannot fully be understood without reference to the surrounding social context.

An example of the economic sociology approach is the study by Yakubovich, et. al. (2005) of electric power pricing. During the formative years of the electric power industry in the United States, there was a spirited debate about how electricity should be priced. Electricity was unique in the sense that the cost of providing electric service was driven not only by the demand for electric power at any particular moment, but also by the need to build capacity to accommodate the highest anticipated demand during the year – the so-called "peak demand". Two different approaches to pricing were proposed; the Wright system and the Barstow system. Ultimately, the Wright system prevailed. The authors argue that economic theory "does not lead to any strong prediction as to which pricing system we should expect to have been adopted." (pg. 580.) The Wright system prevailed not due to its intrinsic superiority nor from persuasive argument, "but from complex manipulations and exercises of power by leading industry actors, who mobilized support through their personal networks and domination of industry trade associations." (pp. 581 - 582.) This emphasis on the importance of personal networks in determining economic outcomes is a particular hallmark of the work of economic sociologists.

Another example of the sociological approach to pricing modalities is Stephen Gelber's (2007) study of bargaining for new cars which he sees as a puzzling exception to the fixed pricing modality that otherwise dominates retail sales in the United States. He argues that bargaining has survived in automobile sales because it is one of the last remaining markets in which men make the majority of the purchasing decisions and that men are more comfortable in the conflict-fraught (and hence masculine) process of bargaining while women strongly prefer the more passive role implied by fixed pricing. "If department stores turned male customers into women by offering them a single price in a feminine environment, then car dealers turned women into men by not posting one true price for their new cars ..."(Gelber 2007, 138). He sees the current mode of bargaining for automobiles as a direct descendent from the male-dominated horse-trading market of the late eighteenth and early nineteenth century.

Gelber's analysis is purist in the sense that it focuses almost entirely on the historical and sociological dimensions of the automobile market. He mentions but does not explore the fact that bargaining is likely to be more prevalent for "big-ticket" items such as automobiles and houses than it is for "small-ticket" items such as groceries or clothing. He presents no evidence that other retail items with predominately male buyers such as shop tools or hunting equipment are more prone to bargaining than retail items with predominantly female buyers. While has analysis is incomplete, it is not necessarily wrong. Both auto manufacturers and dealers are aware of surveys that consistently show that women, on the average, are more averse to bargaining than men(*Business Week* 2007). If a particular manufacturer or dealer group thought that it was in its interest to unilaterally change its practice in order to attract more female customers, there is no reason why it could not do so. And, in fact, there have been sporadic attempts to introduce fixed pricing for automobiles over time, ranging from Sears in 1912 (Emmet and Jeuck 1950, 220-221) to more recent attempts by Saturn and others (*Business Week* 2007). The fact that bargaining has survived the face of these and other attempts to institute fixed pricing still requires explanation.

2.4 Application to Pricing Modalities

None of the three approaches described above can, by itself, fully explain the variety of pricing modalities used in various markets around the world. In particular, arguments from market optimality often need to be supplemented by references to history and social factors if a particular market is to be understood. The next sections present three specific examples: the television advertising market in the United States, movie ticket sales, and fixed pricing in retailing.

3 Why is television advertising sold in an upfront market?

The market for television advertising slots in the United States has a curious structure. The bulk of television advertising is bought and sold in a short period in May and June known as the *upfront market*. The upfront market for prime-time advertising typically commences shortly after the networks have announced their fall schedules.[4] The sellers in the upfront market are the major television networks such as CBS, NBC, and Fox and the buyers are advertising agencies such as J. Walter Thompson or BBDO. The agencies typically purchase advertising slots on behalf of

[4]This article considers the only the *prime-time upfront market*. There are separate upfront markets for Saturday children's' programs and for other daytime programming (Blumenthal and Goodenough 1998). However, the prime-time upfront market is by far the largest. The "upfront" market in this article refers to the prime-time upfront market.

corporate advertisers such as Anheuser Busch and General Motors. Contracts negotiated in the up-front market are primarily for the television season starting in the following September. For the most part, the commodities being bought and sold are not the slots themselves but impressions (or eyeballs) where each impression is a single person viewing the commercial.[5] The standard industry unit of price is the *CPM* which stands for "cost per thousand impressions." Not all impressions are created equal – most advertisers are interested in reaching particular demographics. For example, an advertiser might wish to purchase "two million impressions of young males $21 - 25$." During the upfront market, the networks will sell 70% to 90% or more of their anticipated inventory. They sell the remaining inventory during the year in the so-called *scatter market* or use them in-house to advertise the network's own programming.[6]

An important characteristic of the television advertising market is that networks sell *impressions*, but their unit of supply is *slots*. A typical advertising slot is 30 seconds long and may occur during a program or in-between programs. Following the close of the upfront market, each network must determine how to allocate its fixed inventory of slots to advertisers in order to meet its commitments $--$ that is, how to deliver the number of impressions that it has promised. Scheduling advertisements is subject to a complicated set of business constraints – for example, two advertisements for the same product cannot be shown in adjacent slots. Determining how to assign advertisements to slots to best meet contracted upfront obligations subject to these constraints presents a problem of great complexity (Bollapragada and Garbiras 2004; Brusco 2007) for which many networks have developed or purchased sophisticated software systems (Bollapragada, et. al. 2002).

The upfront market operates on a bargaining modality. "The network's offer is almost never accepted at once but serves as the basis of spirited negotiations as to programs to be included, cost per thousand, audience guarantees, etc." (Belville, pg. 192.) The upfront market is extremely hectic – it requires both buyers and sellers to work long hours, often late into the night. The frantic negotiation process is prone to clerical errors that can lead to unintentional or mistaken offers. Finally, the upfront market requires both the advertising agencies and the networks to make firm contractual commitments under substantial uncertainty. Neither the networks nor the advertising agencies can fully predict the performance of the programs in the fall lineup. A network runs the risk of under-delivering impressions and needing to "make up" its commitments to advertisers – usually by providing additional slots. On the other hand, the advertising agencies need to make deals several months prior to their delivery. During that period, the needs of their clients (the advertisers themselves) may well change. Furthermore, it is likely that many advertising agencies would probably prefer to wait to see how various shows perform before they commit to buy slots.

How did the upfront market come to be and why does it persist? There are many other more

[5]Viewership for programs and commercials is monitored by independent agencies such as A.C. Nielsen who sell the results to the agencies and networks.

[6]For a more detailed description of operation of the market see Graham Young's Chapter in this volume.

obvious and convenient ways in which television advertising could be bought and sold. In other industries with fixed, perishable capacity, buyers can purchase future units in bulk at almost any time during the year. Thus, even very large groups such as conferences can enter negotiations at any time with airlines and hotels for purchase of future capacity: there is no "upfront market" for airline seats or hotel rooms. In fact, at various times over the years, advertisers and agencies have suggested that the industry should eliminate the upfront market in favor of a "continuous market" (Ephron 2003, pg. 10). But the upfront market has remained largely unchanged for almost fifty years. This suggests that we must look to the history of the upfront market to provide an explanation.

3.1 The History of the Upfront Market

Commercial television appeared in a serious form in the United States in the years following World War II. The "big three" television networks – ABC, CBS, and NBC – were originally radio networks and the structure of the new industry closely followed the established structure of radio. Despite some initial moves at government subsidy, the new medium, like radio, soon became 100% advertiser funded. And early television, like radio, was dominated by a small number of networks, each with a national organization of affiliated stations.

During the so-called "golden age" of live television (from the end of World War II into the late 1950's), advertisers typically sponsored an entire season of shows. In many cases, the sponsors' name would be part of the title of the show – *The Ford Theatre Hour, The Chrysler Shower of Stars, The Kraft Playhouse*. This approach had been adopted directly from radio, which is not surprising since the "big three" television networks – ABC, CBS, and NBC – were all originally radio networks. During the golden age, "it was standard for all networks to pay a program's production costs and additional fees for the network's airtime, based on the time of the day that the show aired and the number of affiliates that carried a program" (Weinstein 2004, pg. 42). Most programs of the period were variety shows or staged plays that lent themselves well to live broadcast. Commercials consisted of celebrity endorsements or live product demonstrations. Since advertisers financed an entire series, all of the advertisements during a show would be from a single sponsor. Negotiations between sponsors and the networks took place during February with final commitments usually in place by the first of March (Ephron 2003). The negotiations were for the opportunity to sponsor an entire series – there was little or no market for individual slots.[7]

[7] A fascinating exception to this pattern was the so called "fourth network"; the DuMont Television Network. Founded by DuMont Laboratories, a television set manufacturer, in 1946, DuMont did not have a radio heritage. Because of this, and because it was under severe financial stress for almost the entirety of its existence, DuMont was far more flexible than the "big three" networks in how it sold advertising. It would air unsponsored programs and allow advertisers to buy individual or multiple slots (Weinstein 2004, 411 - 413.). However, DuMont ceased effective operations in 1955 and did not play any meaningful role in the development of the future television advertising

During the period from the mid-fifties through the early sixties, the structure of the industry changed from a *sponsor-centric* model to a *network-centric model*. The differences between the two models are shown in Table 1. Under the sponsor-centric model, shows were sponsored by one or two advertisers and produced by advertising agencies such as J. Walter Thompson and McCann-Erickson. By the 1957 fall season, only three shows were still produced by an agency – the remainder were network-produced or purchased by the network from independent producers (Mashon, 2007; pg. 149). The responsibility for developing, financing, and producing shows was moving from the sponsors and the agencies to the networks. In this new world:

> ...a program series was contracted to the network, not to the sponsor, as was previously the case. The network would schedule the program and either sell sponsorships or participation to interested advertisers. Since this new responsibility brought with it greater financial risks, the networks began to share the cost of pilots with the show's producers. If a pilot show was accepted for network scheduling, the network retained its financial interest in the series.(Heighton and Cunningham, 1976; pg. 34.)

The shift from single-sponsor shows to multiple sponsor shows was gradual but inexorable: during the 1956-57 season, 75% of prime-time programs were single-sponsor, by the 1964-1965 season the fraction had dropped to only 13% (Boddy 1990,pg. 159).

Model	**Program Financed**	**Program Produced**	**Network Sells**	**Market Structure**
Sponsor-centric	By Sponsor	By ad agency or network.	Opportunity to sponsor.	Negotiations
Network-centric	By Network	By network or independent producer	Slots or impressions	Upfront plus scatter

Table 1: Comparison of the sponsor-centric and network-centric models for television advertising sales.

By the mid sixties, single sponsorship was almost extinct. Instead, the networks developed their own programs or purchased them from independent producers or Hollywood studios and scheduled them as they saw fit. Instead of sponsoring shows, advertisers – through their intermediaries, the agencies – now purchased slots across many different shows often spread among two or more networks. The difference between the old "sponsor-centric model" and the new "network-centric model" is summarized in Table 1.

Why did the financing model for television shows change? Television historians often cite the "quiz-show scandal" as a precipitating factor. In 1959, participants in Revlon's extremely popular

market.

The $64,000 Question show revealed that "...the sponsor had dictated which contestants would be kept on the program and which ones would be eliminated ..." based on ratings considerations (Heighton and Cunningham, 1976; pg. 33). In other words, the shows had been fixed. Many viewers were outraged at the deception and Congressional hearings ensued, resulting in legislation forbidding networks, sponsors or agencies from "fixing" game shows in the future. According to some writers, networks used the "cover" provided by the quiz-show scandal to take control of programming.[8]

While the quiz-show scandal may have hastened the demise of the sponsor-centric model, several technological and institutional trends had been pushing the industry toward a network-centric model for years. The introduction of video-tape recording in 1957 changed the economics of the industry. Prior to 1957, the only alternative to live television was film, which was expensive and cumbersome. Starting in 1958, shows were increasingly shot in the much more flexible medium of videotape. This meant that television was no longer stagebound – programs could move out of the studio and into the open air. But, while the cost of recording programs was going down, the cost of producing them was going up. It was becoming prohibitively expensive for a single sponsor to finance an entire season of shows. For a while, alternating sponsorships were common – thus *Philco Television Playhouse* and *Goodyear Television Playhouse* were the same show, broadcast in the same time-slot but with different sponsors (Barnouw 1978, 41). But there were fewer and fewer takers for the expensive proposition of financing an entire season – or even half a season – of shows. Furthermore, small-ticket consumer goods like Procter & Gamble and Lever Brothers were interested in advertising their products but not necessarily in sponsoring entire shows (Mashon 2007, pg. 149). Videotaped commercials inserted into videotaped programs made it just as easy for to show commercials from five or six different sponsors during a show as from just one. Finally, facing a declining market for movies, several Hollywood studios turned their hand to producing television shows as well as leasing their backlog of films to television networks and syndicates (Mashon 2007, pg. 148). This provided a ready source of content that did not require investment in producing shows.

Under the new model, advertisers bought time slots on different shows, usually using an agency as intermediary. The agency was now able to buy slots for a single advertiser on many shows on different networks, providing much greater flexibility. However, since slot purchases took place in advance of airing, it was still a risky business. In 1962, an advertising executive with BBDO compared purchasing time slots on television to "going to las Vegas": "Last season two new half-hour situation comedies made their debut, each costing $57,000 per program. One got an audience of 5,159,000 homes per minute. The other delivered 14,070,000 homes per minute" (Foreman 1962, 44.). He contrasted this situation unfavorably to advertising in newspapers and magazines in which

[8]See, for example, Ephron(2003), pg. 7. This scandal was the inspiration for the 2005 movie, *Quiz Show*.

case, "...our advertiser *knows* how many people are going to get the magazines and the newspapers he buys. This is *guaranteed* him" (Foreman 1962, pg 33. Emphasis in original.). In response to similar complaints from advertisers and agencies, the networks ultimately agreed to guarantee impressions. The first guaranteed CPM deal was negotiated between American Home Products and ABC in 1967 (Ephron 2007, pg. 9). Guaranteed CPM's turned out to benefit both advertisers and networks. Guaranteed CPM's took the risk out of buying for advertisers. Guaranteed CPMS also benefited networks who no longer had to sell slots in individual shows. Previously, advertisers had been very eager to buy the limited "real estate" in hit shows – especially those in the Nielsen "top 10" – but were unwilling to buy slots at anything but bargain prices in less popular or new shows. By selling instead of slots CPM's, the networks could bundle all of their inventory. In return, they guaranteed audience delivery. Guaranteed CPM's quickly became the industry standard and are the basis for the vast majority of television advertising sales today.

The upfront market seems to have emerged during the transition of commercial television from a sponsor-centric model to a network-centric model. However, the roots of the upfront market go back to the days before television, when radio was the dominant entertainment medium. Since at least the 1930's radio programming typically followed a September to May season. A commonly cited rationale was that audiences were lighter during the summer months and performers liked to take a summer vacation (Hettinger and Neff 1938; 159.). As a result, network advertising contracts for radio, like their later television counterparts, usually started in October and lasted until the following April or May (Hettinger 1934, pg. 186). Television seems to have inherited the idea of a fall season from radio – possibly a direct result of the fact that the big-three networks came from radio. Although early television shows could premier any time of the year, a season starting in September and lasting until April or May became standard for all four networks by the 1951-1952 season (Castleman and Podzarik 1982). Completing negotiations by the end of February gave advertisers and their agencies the time necessary to script and prepare the (live) shows for the new season. As the networks moved from selling shows and show times to selling slots, it is easy to see how the annual negotiation cycle could move from a) selling single-show sponsorships to b) selling both sponsorships and slots to c) selling only slots. The upfront system was evidently in place by 1962, when an advertising executive could complain, "...the advertiser must make his decisions in March, knowing that he will have to live with them for the entire year that begins the following October!" (Foreman 1962, 44).

Questions remain regarding the origin of the upfront market and how it survived and evolved through the changing relationships among advertisers, networks, and agencies. It would be interesting to know the extent to which there was explicit coordination among the major players in the market (networks and advertisers) in establishing the market versus "organic" evolution from the earlier market for sponsored programs. It would also be interesting to trace how and why the market moved from February for radio show sponsorship in 1938 to March for television sponsorship by 1963 to May and June currently.

The upfront market has proved to be remarkably durable. It has remained little changed for the last fifty years despite sporadic efforts – usually initiated by advertisers and agencies – to "reform" it. In response to a CPM increase of 25% for the 1975-1976 season, the largest television advertising agency J. Walter Thompson, decided not to bid in the upfront market. But the move backfired when the agency was forced to pay more for poorer slots in the scatter market (Ephron 2003, pp. 8-9). A group formed by advertisers and media buyers in 2004 specifically to reform the upfront market also failed to force any changes (McClintock 2004). The rise of cable television and the entry of new broadcast networks changed many aspects of the industry, but the upfront market has remained largely unchanged– the new broadcast networks; Fox, UPN, and Warner Brothers (WB); simply entered as new participants playing by the same rules and the cable networks started their own "cable upfront" market (Schneider 2002). Thus, despite its apparent idiosyncrasy and inefficiency, the upfront market has survived for at least fifty years and is still alive and well today.[9]

3.2 Is the upfront market an example of path-dependence?

A pure economic equilibrium explanation for the upfront market would be that it is the "logical" market structure given the basic institutional and technological characteristics of the market for television advertising. Allaz and Vila (1993) present a two-period model of oligopolistic suppliers with constrained capacity in which a forward market forms despite the fact that it makes the sellers as a whole worse-off than selling on the spot market alone. They do not apply their approach to television advertising, but their analysis could plausibly serve as a starting point for a model of the upfront market. Such a model would need to reflect the fact that the television network ad market is not only oligosponistic – with only six major sellers – but also highly concentrated on the buyers' side with four large advertising agencies accounting for almost 40% of total upfront ad spend (Ephron 2003, pg. 7.)

Any explanation of the upfront market needs to account for the fact that advertising markets in countries other than the United States are structured quite differently. In Canada, the upfront market is quite small (about 20% of the total) and most advertising is sold on the scatter market. In Australia and New Zealand there is no upfront market – advertisers contract periodically throughout the year with the networks. (Graham Young, personal conversation confirm with Graham). It seems unlikely that these differences represent unique technological or current regulatory environments within these countries. Rather, it seems likely that, to a large extent, they reflect the different historical pathways of commercial television in the different countries. For example most European television industries have a much longer tradition of both government support and

[9]Or at least alive. Apparently, due to poor economic conditions, the 2008 upfront market was much less elaborate than its predecessors (*New York Times Magazine*).

control than the American industry ( ). It is also significant that advertising markets in other media such as newspapers and magazines do not have upfront markets. Neither do group sales for airlines, hotels, or cruise lines. Only television advertising in the United States sells the majority of its inventory through an upfront market.

A key element in the persistence of the upfront market appears to be the institutional and human capital infrastructure that has developed around it. The upfront market is avidly anticipated and followed by media journalists and stock analysts. The volume of upfront sales made by a network is considered an indicator of corporate performance and the total volume of upfront sales is seen as an indicator of the financial health of the television industry. Prior to the upfront market, equity analysts prepare detailed forecasts of network performance. For one example, David Joyce, an equity analyst for Miller Tabak predicted of the 2007 upfront market: "The market will grow 4.7% to just under $9.5 billion with CBS moving up 5.3% to $2.5 billion, ABC climbing 4.3% to $2.04 billion, NBC rising 3.9% to $1.98 billion and Fox going 5% to $1.98 billion" (Friedman 2007). Similar analysis of upfront "winners" and "losers" takes place once the market is complete and the networks have announced the results. In the face of such scrutiny, network executives are understandably reluctant to "opt out" of the upfront market: "If we announced that we were going to stop selling on the upfront market, the analysts would assume that we were simply making excuses for low demand and we would get clobbered."[10]

The upfront/scatter market structure is woven deeply into the fabric of the television industry. Both the networks and the advertising agencies have invested many years and dollars in developing the capabilities needed to operate in this environment. The large advertising agencies employ specialists in developing and negotiating upfront deals. The networks have both people and systems focused exclusively on extracting as much revenue as possible in the upfront market. Equity analysts and journalists use upfront market performance as important financial indicators. Deviating from the current modality would require abandoning this familiar world, writing off millions of dollars in investment and sailing into unknown waters.

This does not mean that the upfront/scatter market structure is not a Nash equilibrium of some game. If a large agency, a large advertiser or a major network saw that it was to their advantage to withdraw unilaterally from the upfront market and deal on some other basis, they would surely do so. If enough players withdrew, the upfront market would collapse. Thus, it is unquestionably true that all the major players believe it is in their interest to participate – at least as long as others participate. This, by definition, implies that the upfront market is a Nash Equilibrium of some game. The question is, what game? How big does the "television advertising market game" need to be before the upfront market falls out as a unique subgame-perfect Nash equilibrium – if it ever does? It appears that equity analysts and network shareholder might need to be included

[10] clean up quote.

as players since their expectations are cited as a reason for continued network. On the other hand, equity analysts only follow the upfront market because it has been important historically. In other words, the motivations and even the identities of the "players" have been shaped by the history of the game.

4 Why do movie tickets cost the same on Tuesday nights as Saturday nights?

When the movie *Dreamgirls* opened in December, 2006, theaters in Los Angeles, New York, and San Francisco charged $25.00 per ticket – almost twice the usual price – during the first ten days of its run. Despite the high price, enough people flocked to the musical to fill almost all of the available seats. Ticket prices were lowered to more usual levels after the initial two weeks and the movie went on to a successful nationwide run (Hessel, 2007).

To an economist or a pricing analyst, the unusual thing about the differential pricing of *Dreamgirls* tickets is precisely how rare it is. On the surface, movie ticket pricing meets all of the characteristics for differentiated "peak pricing" (Phillips, Chapter 5). As with passenger airlines, the seating capacity of movie theaters is fixed and immediately perishable – an empty seat is an irrecoverable source of lost revenue. In common with other revenue management industries, demand for movie seats is uncertain but follows some predictable patterns. Movie demand is reliably stronger during the summer and on holidays than during other times of the year and is stronger on weekend nights than on week nights or during matinees. Demand also tends to decline or "decay" after release in a fairly consistent fashion (Einav 2007). Furthermore, demand varies among genres: during the period from 1985-1999, the average revenue per movie for the most popular genre – science fiction – was more than seven times the average for the least popular – documentaries (Orbach 2005; Figure 4.). R-rated movies tend to have lower box-office returns than G or PG rated movies (Sawhney and Eliashberg 1996). Both the cost of a motion picture and the amount of marketing and advertising expenditure have strong positive correlations with total revenue and the industry has become increasingly dependent on the success of costly, highly-promoted "blockbusters" (Eliashberg, et. al., 2006).

Forecasting demand for movie seats is far from an exact science. There will always be high-profile, high-budget flops such as *Waterworld* and surprise, low-budget, hits such as *Little Miss Sunshine*. Nonetheless, most economists or pricing analysts who have examined the industry have concluded that there is no apparent reason why the industry could not benefit from more differentiated pricing. Broadway theaters, whose demand is arguably less predictable, routinely use various forms of price differentiation ranging from different prices for different seating qualities to half-price tickets sold through the TKTS outlet on the day of the show.[11] Even professional sporting events – long known for pricing conservatism – have begun to vary prices according to the anticipated demand for individual games.[12] Why are movie theaters reluctant to follow suit?

Barak Orbach has examined the "riddle of motion picture pricing" in some detail. The current near-uniformity of prices within a theater is particularly puzzling because prior to 1970 there was significant pricing differentiation. According to Orbach, "throughout the 1950s and 1960s there was a clear distinction between pricing of regular and event movies. Exhibitors also maintained price variation between weekdays and weekends and among different types of seat."(Orbach, 2004, pg. 348.) Furthermore, theaters and theater chains still differentiate prices according to geography: "Admission fees in certain cities are as much as three times higher than in other cities."(Orbach, 2004; pg 322.) Given that theaters and theater chains are not allergic to price-differentiation among cities, why do they universally maintain uniform pricing within the same theater?

According to Orbach (2004), the shift from differentiated to uniform pricing can be dated to the release of *The Godfather* in 1970. *The Godfather* was released with uniform pricing nationwide and became the highest grossing movie to date. It seems unlikely that all theaters from coast-to-coast showing *The Godfather* would all choose to charge the same uniform price. "It seems unlikely that all movie theaters nationwide would have simultaneously decided to release the movie at the same price without outside pressure or coordination (Orbach, pg. x (fix up quote)). Orbach's hypothesis as presented in both Orbach (2004) and Einav and Orbach (2007) is that tacit pressure from movie distributors led to the universal adoption of uniform pricing by the industry in the 1970's and its persistence to the present day.

In theory, distributors are prohibited from influencing pricing by the terms of the Supreme Court judgment in the case of *United States vs. Paramount* (1948) and a series of related consent decrees. Prior to *Paramount*, a cartel of eight distributors controlled the production, distribution, and exhibition of movies in the United States.[13] The outcome of the case included prohibitions against direct and indirect distributor intervention in box-office pricing and against any movie licensing agreement which is not theater-by-theater and movie-by-movie – that is, "bundled" licensing agreements are not allowed.

Given that differentiated pricing had proved effective in the past and that distributors are legally prohibited from influencing pricing, why do theaters practice uniform pricing? Einav and Orbach (2007) consider six possible reasons:

1. Perceived unfairness of differentiated prices on the part of consumers.

[11] See Leslie (2004) for an overview of price differentiation strategies used by Broadway theaters.

[12] See, for example, the pricing scheme for the Colorado Rockies in Phillips (2005), pg. 106.

[13] See Orbach (2004) for a detailed discussion of the *Paramount* case, its justification, and its ramifications for the industry.

2. Price may be a quality signal – a discount price would lead consumers to believe that a particular movie is inferior, thus leading to a sharp decrease in demand.

3. Demand uncertainty.

4. Menu and monitoring costs, particularly at large multiplexes in which a single ticket taker provides entry to many different movies.

5. Agency problems – for example, a distributor does not care about concession revenue, which can be a large component of profitability for an exhibitor.

6. Double marginalization. An industry structure in which a monopolistic supplier (such as the studio) sells to customers through a monopolistic distributor (such as a theater) has been shown to result in higher-than-optimal pricing to customers as well as lower-than-optimal profits for both the supplier and the distributor.

For various reasons, they dismiss all of these reasons as either misguided or as insufficient to explain uniform pricing. I believe that their arguments are persuasive. It is very difficult to argue that uniform movie pricing is now optimal when differential pricing was used in the past and is also used in settings such as Broadway theaters and sporting events that share many characteristics with movie theaters.

The hypothesis that tacit pressure by distributors influences theater prices is supported by statements from the exhibitors. For example, the executive director of a small Tucson theater commented, with respect to variable pricing, "The whole subject is very intriguing, but we're not going to do anything to disrupt our relationships with our distributors because they're our life blood. It might have to be something done by one chain that had 5,000 screens and the sufficient power over distributors to do it."[14] But, there is no "smoking gun" – no documented evidence of explicit pressure applied by distributors on exhibitors to adopt uniform pricing. This is not entirely unexpected, since such pressure would almost surely be judged to be in violation of the Paramount agreement.

Orbach invokes conservatism as one explanation for the persistence of uniform pricing: "Conservatism in this context is the adherence of the industry to an established practice without examining its justifications. In the exhibition market, conservatism seems to be fed by unexamined concerns that the transition to variable pricing would be financially disadvantageous."(Orbach 2004, 363-364). Ultimately, appeals to "conservatism" or inertia as rationales are somewhat unsatisfactory in this case. Unlike the upfront market for television advertising, there does not appear to be significant monetary or human capital investment in uniform pricing by theater operators – it would be quite easy for a particular operator to institute differentiated pricing. This strongly implies

[14] Quoted in Stauffer (2007).

that theater managers have significant doubts whether differentiated pricing would be successful in generating additional revenue and/or they fear some sort of adverse reaction either from consumers, competitors, or distributors. The upshot is that the question of why movie tickets cost the same on Tuesday night as they do on Saturday night remains open. The lack of pricing differentiation certainly appears to be suboptimal from a market equilibrium point-of-view, but the factors preventing theater owners from moving to more differentiated pricing have yet to be definitively identified.

5 Why do retailers sell at fixed prices?

The most important trend in pricing in modern times has been the rise of fixed pricing. A *fixed pricing* modality includes five elements:

1. *The seller chooses a price.* Under fixed pricing, price is the seller's unilateral decision.
2. *The seller posts the price in a market for potential buyers to see.* Typical posting methods are price tags or labels, menus with prices, catalogs with listed prices, or on-line price lists.
3. *Buyers observe the price and choose whether or not to purchase, and if so, how much to purchase.* In a fixed-price market buyers have no direct say in the price – their only decision is whether or not to purchase at the current price. Of course, savvy sellers will adjust their prices over time in response to buyers' actions, but this occurs on a time-scale longer than an individual transaction.
4. *Transactions take place exclusively, at the posted price.*

It should be made clear that fixed-pricing is in no way inconsistent with price-differentiation, customer segmentation, volume discounts, dynamic pricing or other common pricing tactics. A movie theater selling tickets at \$12.50 to the general public but offering senior citizens a \$2.00 discount is still practicing fixed pricing. So is a retailer running a "buy one get one free" promotion in its stores, as is a grocery store offering a "25 cents off a gallon of milk" coupon to some of its customers. In all of these cases, the seller has unilaterally set prices and communicated them to customers (albeit with potentially different prices to different customers) – the only decision that each customer faces is whether or not to buy.

About 50% of consumer expenditure in the United States is spent on goods and services that are sold in markets that (almost) exclusively use fixed prices. These include food, beverages, household supplies, gasoline, public transportation, and entertainment. Goods and services that are sold using other modalities include housing, vehicle purchases, charity, and insurance.[15] While

[15] Calculations were based on 2006 expenditure figures by category available on-line at http://www.bls.gov/news.release/cpi.t01.htm. Details of underlying calculations are available from the author.

50% of household *expenditure* dollars are spent on a fixed price basis, the percentage of household *transactions* that take place on a fixed-price basis is unquestionably much higher. The non-fixed price transactions are "big ticket" items as housing and vehicle purchases which are transacted rarely – typically less than once per year. Almost all common purchases such as buying a meal at a restaurant, groceries at a grocery store, books at a bookstore, personal items at a drugstore, or clothing from a department store, are fixed price transactions. Given its ubiquity, many might find it surprising that retail selling at fixed pricing is less than 150 years old.

5.1 The Prehistory of Fixed Pricing

Bargaining was the dominant pricing modality in the West from Classical times well into the nineteenth century. Haggling or bargaining was the standard procedure for buying and selling almost anything. Buyers and sellers haggled over the price of produce in a market, over the price of shoes, of tailored clothing, of skilled handiwork, of land, of horses, of almost anything. In the classical world, auctions were also common – many unique and expensive items such as slaves, land, or furniture were commonly sold at auction.[16] Fixed pricing was, at best, a distant third – indeed, with the possible exception of inns and taverns (Casson, 1974), it is difficult to find evidence of anything at all being sold at a fixed price during Classical times.

The situation continued past the fall of Rome, through the Medieval world, through the Renaissance and into the modern age. Individual purchases were typically based on bargaining or negotiation. Transactions among merchants, traders, and their agents (the "B-to-B" economy of the time) were based on various types of contracts and agreements that were undoubtedly intensely negotiated.

Fixed and posted pricing began to appear in various urban institutions starting in the eighteenth century. The first coffee houses in London opened in the mid seventeenth century and apparently charged fixed and relatively stable prices (Ackroyd, 2000; pp. 319-324). The first restaurants appeared in Paris in the three decades prior to the Revolution. They differed from inns and taverns in that they catered to locals, not travelers. The early restaurants had menus with fixed prices that were direct adaptations of the *menus de hoté* that hosts distributed to their guests at dinner parties..[17] Computations for large parties needed to be kept simple in the days before the cash register so a common practice was to charge a fixed price for the meal with prices for beverages listed separately. Hotels, which arose in the United States in the years following the American Revolution, also advertised and posted prices as early as the 1820's (Sandoval-Strausz, 2007).

Transporters of goods and services also posted prices before the start of the nineteenth century.

[16] The Romans in particular made widespread use of auctions – Trimalchio in *The Satyricon* is going to sell his "surplus furniture" at auction [Petronius, pg x]. And, in 193 AD, the Praetorian Guard, after killing the emperor Pertinax, sold the entire Roman Empire at an auction. Didius Julianus won with a bid of 250,000 sesterces per man.

[17] x

Carriage lines in England and America in the late eighteenth century advertised prices. For example, the *New York Times* of March 13, 1789 had an advertisement for "New York & Baltimore Stages" that offered "Fare for each passenger 4 dollars, way passengers 4d per mile."[18] However, one of the most important early fixed pricers were the railroads. Railroads were among the very first large industrial organizations. They developed many common business practices such as a hierarchy of managers and detailed cost accounting that would later become standard across other industries – including retail. Railroad travel was an easily standardized product that lent itself naturally to fixed pricing. Indeed, railroads were not only early fixed pricers, they were also pioneers in institutionalizing price discrimination, as in the famous quote from the French economist Dupuit:

> It is not because of the few thousand francs which would have to be spent to put a roof over the third-class carriages or to upholster the third-class seats that some company or other has open carriages with wooden benches. What the company is trying to do is to prevent the passengers who can pay the second class fare from traveling third class; it hits the poor, not because it wants to hurt them, but to frighten the rich. And it is again for the same reason that the companies,having proved almost cruel to the third-class passengers and mean to the second-class ones, become lavish in dealing with first-class passengers. Having refused the poor what is necessary, they give the rich what is superfluous (Dupuit).

Thus, "fixed pricing" was hardly unknown by the mid-nineteenth century. Yet bargaining was unquestionably the most common modality for the vast majority of purchases. After all, restaurants were primarily for the urban middle and upper classes at a time when the vast majority of the population was rural. A railroad trip would be a rarity for most people and only about 20% of the population in 1840 could afford to stay in a hotel (Sandoval-Strauss 2007). Most people, most of the time, did their buying in stores – and in stores, before the 1860's, bargaining was almost universal.[19] In smaller stores, the proprietor knew the cost of every good and negotiated every deal personally. Larger stores with numbers of clerks often utilized the "price code" system in which information on price-tags was listed in a code that the customer could not read:

> Every merchant selected a Price Symbol as soon as he went into business, and it was made a password to his sales methods. It had to contain ten letters, preferably not two were alike and it could not be too easy to decipher. Some of these were "Baltimore," "Comb basket," "Black Snake," "Prudential," "Cumberland," the first ten letters of the Greek alphabet, and special symbols such as those used by the J. D. McGraw house in Louisville, Mississippi, $\wedge$ $\vee$ ϕ θ $\times$. Thus markings on goods

[18]Reprinted in Crow (1943), following pg. 18.

[19]In some stores, some basic commodities such as tea, sugar, salt, meal and flour were apparently sold at fixed prices prior to the Civil War (Norris 1962, pg. 456).

> became "$\bigwedge Z \times \times$" or \$14.00. Always it was the practice to mark goods with both the purchase and selling prices. ... One of the favorite pastimes for the few customers who understood the use of code words was that of trying to guess what they meant. (Clark, 1944; pp. 317-318.)

This system favored buyers who were most willing and able to haggle. As John Wanamaker put it, prior to 1865, "There was no selling price for goods – there was an asking price, and the most persistent haggler bought the goods far below the unwary." (Wanamaker, 1911; pg 27.) It was not just customers who haggled with merchants – haggling was standard throughout the retail supply chain. "Manufacturers and importers bargained for the highest amounts they could get from wholesalers and jobbers. Wholesalers and jobbers put the squeeze on retailers for the last possible dime, and retailers in turn charged their customers as much as they feel the traffic would bear."(Scull, 1967; pg. 79.) Haggling (or "higgling" as it was also called) had the benefit of enabling the savvy retailer to practice price discrimination. "A prosperous customer was quoted one price – subject, of course, to considerable negotiation – while a less affluent customer was quoted a lower price, also subject to adjustment if the customer had the time and stamina to negotiate. Price lists, if they existed at all, were mere scraps of paper."(Scull, 1967; pg 79.)

A glimpse of this world can be seen in Emile Zola's novel, *The Belly of Paris* which is set in the Les Halles market in Paris in the 1850's. Haggling is the basis of every transaction and *caveat emptor* is the rule. A naive servant who overpays for a fish is jeered and hectored by the other stall owners when she tries to return it (Zola, 1873/2007; pg.). Other glimpses can be seen from contemporary marketplaces in traditional economies, for example, in rural Mexico: "(for maize) one dealer observed asked \$4.50 a pesada, sold fairly readily at \$4.40 and would go to \$4.20. If the client were very persistent, he might even sell at \$4.00. If so, however, he managed to short weight the client of about half a kilogram of grain by clever manipulation ... Yet for regular customers who have agreed on a "good" price, most dealers add a little maize after the weighing is complete ... " (Beals, 1975; pg 167).

The system of bargaining for goods was the standard in Western society – as in most of the world – for millenia. However, as the 1860's dawned, the world of retail was about to undergo a profound change.

5.2 The fixed pricing revolution

It is impossible to determine which retailer was the first to use fixed pricing. Quaker merchants, who had a reputation for probity[20] are often credited with being the first to set fixed – although

[20] So much so that many merchants falsely identified themselves as "Quaker", leading to an appeal by representatives of the Religious Society of Friends to the New York Legislature to prohibit the fraudulent use of the word "Quaker" in trade. See "Fight for Name 'Quaker."', *The New York Times*, pg 32., March 26, 1913.

not necessarily posted – prices. In a 1658 tract entitled *A Warning to the Merchants of London*, the most influential early Quaker, George Fox, enjoined merchants to desist from the "cozening and cheating and defrauding" practice of haggling and adopt a fixed price policy (Kent, 1990; pg. 142.) According to Daniel Defoe in *The Complete English Tradesman* (1726), Quakers, "...resolved to ask no more than they would take upon any occasion whatsoever and chose rather to lose the sale of their goods, ..., rather than abate a farthing from the price they had asked."[21] A dry-goods store founded by A.T. Stewart in 1826 is often credited with being the first to employ fixed prices in the United States (Scull, 1967; pg. 81). Some Parisian stores, such as the Petit Dunkerque, were advertising fixed and marked prices in the late 1830's and the Ville de Paris, the largest *magasin de nouveautés* in Paris, also featured fixed and marked prices by 1845 (Miller, 1981).

The idea of fixed retail pricing was clearly in the air by the 1860's. But it was the arrival of those "grand emporiums of commerce", the first large department stores, that established the fixed price policy as the standard. Retail stores selling many different lines of goods with an emphasis on customer service and variety began to appear in the 1850's and 1860's more-or-less simultaneously in the United States and France and a little later in England. Which of these establishments qualifies as the first "department store" is a matter of lively (if somewhat sterile) debate among business historians.[22] What is certain is that, among the most important early department stores were A. T. Stewart's Cast Iron Palace in New York (1862), Rowland Hussey Macy's eponymous New York store (1865), Aristide Boucicaut's Bon Marché in Paris (1850's), and John Wanamaker's Grand Depot (later known as "Wanamakers") in Philadelphia (1876). Each of these four men was a pioneering entrepreneur who brought great energy and marketing savvy to their respective enterprises. All were experienced retailers and all – with the exception of Boucicaut – had experimented with a fixed price policy at previous establishments. Macy, had maintained a fixed price policy (along with a cash-back guarantee) at four different stores before coming to New York City.[23] A.T. Stewart, who had practiced fixed pricing in his previous store since 1826, saw a "one-price policy" as a way both to make his clerks more efficient and to increase customer loyalty (Scull, 1967; pg. 81). "Not two prices, – one price and only one," was John Wanamaker's motto when he founded his first store – a men's and boy's clothing store – in 1861 (Wanamaker, 1911; pg 28.)

Stewart, Macy, Boucicaut and Wanamaker all became known for their fixed-price policies and money-back guarantees at their stores. Stewart put price-tags on all of his goods and advertised his "one-price" policy in the newspapers (Scull, 1967; pg 81.). Wanamaker boasted of his Grand Depot that "The prices of goods were put down at the beginning to the lowest point that they could be sold for and there was no underground way to get them. All were on the ground floor from

[21] Defoe, pg 245. Allen (pg. 37) describes the tension in a small store between an assistant who bargains with a customer and the Quaker owner who expects the goods to be sold "at the prices marked".

[22] See, for example, Resseguie (1962)

[23] Notably all four failed, but Macy maintained a firm belief in fixed prices and money-back guarantees.

the first."(Wanamaker, 1911; pg. 47.) In New York, in Paris and in Philadelphia, the new retail emporiums and their fixed price policies proved enormously popular. Smaller retailers often felt they had to adopt the new policies whether they liked it or not – the introduction of fixed prices by one of the new giants into a particular line of business often resulted in forced conversion to the new policy by smaller retailers. When Wanamaker started selling pianos in 1899, "such thing as a fixed price for a piano, marked in plain figures, was rarely known."(Wanamaker, 1911; pg. 87.) Once Wanamaker entered the business with its usual principle of "One price to all; no favoritism ...", other piano makers in the same market needed to adopt the fixed price system in order to compete.

The fixed-price policy coupled with money-back guarantees spread from the great stores of the East Coast to the rest of the country. Wayland Tonning studied the spread of fixed pricing in Champaign-Urbana, Illinois. He found that there was very sporadic advertising of a "one-price policy" in various stores between 1866 and 1872. In 1872, the Scott & Willis store opened, advertising itself as the "The Philadelphia One Price Family Dry Goods Store" and promising, "To Every Purchaser, All Goods Marked In Plain Figures And ONE PRICE Strictly Adhered To."(Tonning, 1956; pg. 207) The explicit association with Philadelphia suggests some familiarity on the part of both the retailers and their prospective customers with Wanamaker's policy. Following the success of the Scott & Willis store, competing stores gradually adopted the one price policy combined with money-back guarantees. "By the end of the decade (1879) 'warranted goods' was a necessary policy for competitive reasons and the one-price policy was professed by many who included it in their firms' names."(Tonning, 1956; pg. 209.) By the turn of the century, the one-price policy was the standard in Champaign-Urbana. Between 1870 and 1890, fixed pricing moved from being a rare exception to the norm for American retailers. "One Price for Every Man." was being advertised proudly by grocers in remote rural Georgia by the 1880's (Wetherington, 1994; pg 172).

By the turn of the century, the fixed price policy was well on its way to being standard operating procedure for major retail establishment throughout North America and Western Europe. By 1905, prices in London stores were "almost invariably fixed, so that bargaining is unnecessary," (Baedeker, 1905; pg. 25). The 1907 *Baedeker's Guide to Paris* reassured British and American visitors to Paris that "The '*prix fixe*' system now obtains almost universally and, in the larger and more reputable establishments especially, strangers run little risk of being fleeced."(Baedeker, 1907; pg. 48.) George Gissing's novel *Will Warburton* (written in 1902-1903, but published in 1905) is the tale of a clergyman's son who, after suffering financial reversals, is forced to make a living behind a grocery counter, a fate that he finds deeply humiliating. At first, he finds it difficult to separate his sympathy for his customers from his need to run his shop on a profitable basis: "Why, in the early months, it cost him a wrench somewhere to take coppers at the counter from very poor folk who perhaps made up the odd halfpenny in farthings and looked at the coins reluctantly as they laid them down. More than once, he said, 'Oh never mind the ha'penny,' and was met with a look not of gratitude but of blank amazement." A fellow merchant chides him, "That'll never do behind the counter, sir, never!"[24] Tendencies contrary to the fixed pricing norm, even charitable ones, needed to be restrained.

As the twentieth century progressed, fixed pricing became more and more firmly established among American retailers. Nonetheless, a 1947 handbook targeted to returning American servicemen who aspired to open small retail stores admonished them to: "Maintain a strictly one-price policy. All your merchandise should be ticketed with the exact price; under no circumstance deviate from the price shown. Sometimes people are inclined to haggle and bargain with the owner of a small shop, whereas they wouldn't think of questioning prices in a large store. Correct that impression; never bargain or compromise."[25] What is interesting is not the advice itself, but the fact that it was still thought necessary. Even in post World War II America, the hegemony of fixed pricing still needed to be enforced.

5.3 Why did fixed prices win?

Fixed pricing was a critical component of the business model of the new department stores. For one thing, without fixed prices there could be no money-back guarantees. The two went hand-in-hand – mass-volume merchants could not keep the records needed to enable "money-back" guarantees. Under the new regime, the customer lost her right (if that's what it was) to argue for a lower price. In return, the merchant relieved her of some risk by the money-back guarantee.

But, beyond that, fixed prices were critical to the new stores in other ways. Many observers of contemporary markets within so-called "traditional" economies have noted the sophisticated skills required for sellers to thrive in these markets: not only must a seller be able to estimate the willingness-to-pay of each prospective buyer, they must also know the cost of each item and the magnitude of overheads in order to run a long-term business that not only sustains itself but provides a sufficient profit margin(Geertz, 1978; Robertson, 1983). In the small shops that preceded the advent of the department stores, sales clerks performed long apprenticeships before they could be trusted with full responsibility. List-pricing massively simplified the job. It enabled Wanamaker, Macy, and Boucicaut to recruit thousands of workers for their new stores who could become productive sales clerks after only minimal training.

Furthermore, fixed-pricing enabled centralization of the pricing function and generated economies of scale in pricing. In a bargaining modality, selling 10,000 identical items requires 10,000 negotiations and 10,000 pricing decisions. In a fixed-price modality, selling 10,000 identical items requires no negotiation and only a single pricing decision. The superior efficiency of fixed pricing was recognized by A.T. Stewart as early as 1826. Given that fixed pricing reduces the average time consumed

[24]Gissing, p. 152.

[25]Greenberg and Schindall (1947) p. 64, italics in original.

for a new car sale by 82% (Business Week, 2007) it is likely that the time savings from a fixed price policy was substantial, particularly as retail stores grew in size and scope. Some retail historians have claimed that, prior to the advent of fixed pricing, retailing required a much greater number of clerks relative to total sales than afterwards[26] This increased efficiency led to savings that could be passed along to customers in the form of lower prices – thus further increasing the advantage of the larger stores.

The combination of low and fixed prices with unprecedented size and scope meant that the new stores were really something new under the sun. They were acknowledged as such not only by shoppers but also by writers, academics, and journalists. In Paris, Emile Zola was fascinated by Aristide Boucicaut and his creation, The Bon Marché, which he saw as a new, hygienic, and efficient mode of commerce, replacing the old world of small specialized shops and customer haggling. Zola's novel, *La Bonheur des Femmes* – literally "The Ladies' Paradise" – is based closely on The Bon Marché; and its entrepreneurial owner, Octave Mouret, is based on Aristide Boucicaut. In Zola's novel[27], the new store attracts customers in droves with its bright lights, its modern design and its seemingly endless displays of merchandise of all sorts, as well as with its fixed prices, listed on tags, and its return policy. The fixed and posted prices are an integral part of the machinery of commercial seduction that *La Bonheur des Femmes* perfected: even outside the front door, "on the pavement itself, was a mountain of cheap goods, placed at the entrance as a bait, bargains which stopped the women as they passed by . . . Denise saw a piece of tartan at forty-five centimes, strips of American mink at one franc, and mittens at twenty-five centimes. It was a giant fairground display, as if the shop were bursting and throwing its surplus stock into the street."(Zola, 1883/1995; pp 4 - 5)

Fixed prices were even part of the marketing displays at *La Bonheur des Femmes*:

> There was something for every whim, from evening wraps at twenty-nine francs to the velvet coat prices at eighteen hundred francs. The dummies' round bosoms swelled out the material, their wide hips exaggerated the narrow waists and their missing heads were replaced by large price tags with pins stuck through them into the red bunting round the collars, while mirrors on either side of the windows had been skillfully arranged to reflect the dummies, multiplying them endlessly, seeming to fill the street with these beautiful women for sale with huge price tags where their heads should have been (Zola, 1883/1995; pg. 6).

As Zola recognized, fixed and posted prices made possible entirely new retail and marketing

[26]For example, Crow (1946, pp. 142-143) claims that "Old account books show that before the days of fixed prices and retail advertising the storekeeper had to employ two or three times as many clerks as needed today to sell the same quantity of goods". Note also Walter Benjamin's speculation that "The gain in time realized by the abolition of bargaining may have played a role initially in the calculation of department stores." (Benjamin, 1999; pg. 60).

[27]To avoid confusions, we refer to the novel as *The Ladies' Paradise* and the store as *La Bonheur des Femmes*.

strategies. The large stores used their purchasing power to negotiate advantageous contracts with their suppliers. They could use their size and scope to put smaller rivals out of business. In Zola's novel, a small silk retailer, Robineau tries to undercut the price of silk at the Ladies' Paradise by 10 centimes and inadvertently starts the first price war. "And, in fact, the following week Mouret boldly reduced the price of the Paris-Paradise (silk) by twenty centimes ... those twenty centimes meant a dead loss, for the silk was already being sold at cost. It was a severe blow for Robineau; he had not thought that his rival would lower his prices, for such suicidal competitions, such loss-leading sales were then unknown ..." (Zola, 1883/1995; pg. 197). Mouret triumphs by his ability to go ever lower than his competitor and Robineau is ultimately forced out of business.

Fixed prices combined with the power of advertising also enabled the "loss leader":

> "We'll lose a few centimes on these goods, I'll grant you. But so what? It won't be such a disaster if it enables us to attract all the women here and hold them at our mercy, their heads turned at the sight of our piles of goods, emptying their purses without counting! ... After that you can sell the other goods at prices as high as anywhere else, and they'll still think yours are cheapest. For example, our Cuir-d'Or, that taffeta at seven francs fifty, which is on sale everywhere at that price, will seem an extraordinary bargain, and will be sufficient to make up for the loss ..."(Zola, 1883/1995; pg. 39).

The climax of *The Ladies' Paradise* is the much-advertised and much-anticipated sale which generates a frenzy of buying:

> Outstretched hands were continually feeling the materials hanging at the entrance, a calico at thirty-five centimes, a wool and cotton grey material at forty-five centimes, and above all an Orleans cloth at thirty-eight centimes which was playing havoc with the poorer purses. There was much elbowing, a feverish scrimmage round the racks and baskets in which piles of goods at reduced prices laces at ten centimes, ribbons at twenty-five centimes, garters at fifteen, gloves, petticoats, ties, cotton socks and stockings were disappearing as if devoured by the crowd. In spite of the cold weather, the assistants who were selling to the crowd on the pavement could not serve fast enough. A fat woman screamed. Two little girls nearly suffocated (Zola, 1883/1995; pp. 239-240).

The force of Zola's work comes from the fact, that, at the time, all of this was new. The arrival of the *grand magasins* "changed everything" in the relationship between merchant and seller as well as between merchant and merchant. Price-wars, loss-leaders, promotional prices, sales – none of this had any precedent in the old world of haggling in small shops. A new urban pastime, – shopping – was born. Previously, entering a Parisian shop implied an obligation to buy [28] – much as sitting

[28] See Miller (1981), page 24. The ubiquity of the "obligation to buy" in early eighteenth century and seventeenth

at a table in a restaurant today implies a obligation to order – but the *grand magasins* adopted a policy of “free entry” by which people could wander about and simply browse and admire the goods or merely pass the time. The new retailers relied upon the power of their merchandising, the seduction of low prices, the very design of their buildings to drive customers into a sort of buying frenzy. “The sixty thousand francs spent on announcements in the newspapers, the ten thousand posters on walls, and the two hundred thousand catalogues which had been sent out had emptied the women’s purses and left their nerves suffering from the shock of their intoxication; they were still shaken by all of Mouret’s devices: the reduced prices, the system of ‘returns’, his constantly renewed attentions.”(Zola, 1883/1995; pp. 266-267). Parisian consumers were not simply passive victims of the new retailing juggernauts – Zola also chronicled the birth of what is now called the “strategic customer”. When Madame Marty, on impulse, buys a red parasol at fourteen francs fifty, her friend, Madame Bourdelais chides her, “You shouldn’t be in such a hurry. In a month’s time you could have got it for ten francs. They won’t catch me like that!”(Zola, 1883/1995; pg. 245)

Merchants portrayed their fixed price policies in high-minded terms: fixed prices were not only efficient, they promoted harmony. “New, fair and most agreeable relations were established between the purchaser and the seller,” enthused John Wanamaker (Wanamaker 1911). The sentiment is not entirely self-serving – with fixed pricing in place, merchants indeed no longer had to “compete with the customers,” in Clifford Geertz’s phrase. There is no question that an environment of continual haggling could lead to serious disagreements and even worse. It is suggestive that the earliest meanings of the world “bargain” include “struggle” and “fight”. The police in pre-revolutionary Paris continually worried that haggling over the price of bread between customers and bakery owners could lead to riots (Kaplan, 1996). In *La Ventre de Paris*, a dispute between a merchant and a buyer threatens to turn into a general melee (Zola, 1873/2007). Fixed pricing undoubtedly reduced the tension between buyer and seller. The anthropologist Clifford Geertz described marketplace bargaining as “A personal confrontation between intimate antagonists.”(Geertz, 1978; pg 32). With fixed pricing the relationship between merchant and buyer was both less intimate and less antagonistic. Pricing had become impersonal.

5.4 Fixed pricing as impersonal

In *Looking Backward* (1888), Edward Bellamy described a retail store in the Utopian society of the distant future:

> Legends on the walls all about the hall indicated to what classes of commodities the counters below were devoted. . . . it is the business of the clerks to wait on people and take their orders; but it is not the interest of the clerk or the nation to dispose of a yard or a pound of anything to anybody who does not want it. . . . I saw then that there was

century shops has been challenged by Walsh (1999).

> fastened to each sample a card containing in succinct form a complete statement of the make and materials of the goods and all its qualities, as well as price, leaving absolutely no point to hang a question on.(Bellamy 1888/2005, 79-80.)

To this extent – if in little else – Bellamy's Utopian vision has been realized. Retail stores in the early years of the second millennium are indeed characterized by standardized goods, clerks as order takers rather than active sellers, and marked, fixed prices. In fact, much retail trade has gone even further and eliminated the human element altogether. Fixed and posted retail pricing was the first major step in this process. In the words of Stephen Gelber, "posted prices depersonalized the marketplace by making each customer a stranger and, by the same token, ensuring every stranger (customer) that her or she was not being cheated " (Gelber, 2007; 121-122).

Widespread catalogue selling took the depersonalization of pricing even further. Catalogues are a venerable sales channel: a book catalogue with published prices was printed and distributed by Aldus Mantuis of Venice in 1498.[29] Seed and nursery catalogues featuring list prices are known from 1667 and remained popular for centuries – Thomas Jefferson was a habitual buyer from nursery catalogues (Ross, 1992). But seeds, live plants, and books were niche products being offered to small groups of specialized buyers. The first large diversified retail catalogue seller was Montgomery Ward, who mailed their first catalogue – a single sheet – in 1872 (Emmet and Jeuck, 1950; pg. 20). Over the next decade, the single sheet had grown to a 1,000 page catalogue and sales for Montgomery Ward and its later rival Sears Roebuck became one of the greatest successes in the history of American retailing. With their network reaching even to the most isolated farmsteads, catalogue selling spread the originally urban combination of fixed pricing and money-back guarantees to even the most remote rural areas.

Vending machines, which first appeared in England in the early 1890's took the mechanization of pricing even further. Vending machines complete the depersonalization of commerce since they take all contact between buyer and seller –even epistolatory contact – out of the transaction. But vending machines have never represented more than a trivial part of the economy. The first industry to utilize computerized selling on a large scale was the passenger airline industry. And they had to wait for the development of computing and global communication technologies after World War II.

By the 1960's many major passenger airlines were operating globally. Yet passenger reservations still required phone calls and faxes and the reservations themselves were typically stored in huge files full of index cards. It took an average of two hours to process a reservation and seats could not be sold more than 30 days prior to departure. In 1964, after six years of planning, design, and programming, American Airlines and IBM introduced the computerized SABRE[30] reservation and distribution system. One purpose of the SABRE system was to provide a data storage and

[29] Goldsmid and Renouard, Vol I, pg 23 and Vol III pp 29-34.

[30] SABRE is an acronym for "Semi-Automated Business Research Environment."

management system for flight reservations. The other purpose to provide a pipeline by which prices, availabilities, and bookings could be transmitted instantaneously between the airlines and the growing global network of travel agents. As a consequence of this system, airline price distribution – and ultimately hotel, rental car, and cruise line price distribution – was fully mechanized. Prices could be set and updated centrally and immediately transmitted to travel agents worldwide – or at least those with a SABRE computer terminal.[31]

The mechanization of pricing distribution for the airline was more than a simple technical breakthrough. As with the original institution of fixed prices by the early retailers SABRE *consciously and conspicuously* disempowered sales agents. Airline fares read from a computer screen were clearly non-negotiable – they were set by "the computer". Well into the sixties, some customers were inclined to bargain over airline and hotel prices. This was a source of low-level stress for sales and travel agents. SABRE and competing automated distribution systems put an end to that – the human being audibly and visibly clicking the keys on his computer terminal was quite clearly a mere order taker, not a price-setter. "I'm sorry but the computer won't let me do that," is an unanswerable response to any attempt to haggle. The Internet has extended this level of depersonalization to the pricing of almost everything imaginable.

5.5 Fixed pricing as normative

It is striking evidence of the triumph of fixed pricing that it has become strongly normative in retail markets. In these markets, deviations from the fixed pricing norm are at risk of being considered "unfair". This is true even when potential buyers cannot fully articulate the reason why they consider a particular pricing scheme unfair (Haws and Bearden, 2006). The fixed-pricing norm has carried over from retail store purchases to the automated systems. Even when there is no human being involved, customers expect the machines that they are buying from to demonstrate "fairness". The ballyhoo over Coca Cola's expressed intentions to develop a vending machine that would change prices based on temperature is a perfect illustration. In a xxx magazine interview, Douglas Ivester, CEO of Coca-Cola, expressed the opinion that,

> Coca-Cola is a product whose utility varies from moment to moment in a final summer championship, when people meet in a stadium to enjoy themselves, the utility of a chilled Coca-Cola is very high. So it is fair it should be more expensive. The machine will simply make this process automatic.[32]

[31]The history of the SABRE system is recounted in Hopper (1990).

[32]Ivester's statement was originally made in an interview with the Brazilian magazine *Veja* so he was referring to a soccer match. The quotation and more discussion of the reaction to the "temperature sensitive vending machine" can be found in Phillips (2005), pp. 302-303.

Customers had a different view of "fairness" and complained vociferously. Coca-Cola dropped its plans and none of the vending machines have been deployed, almost a decade later.

When the on-line bookseller Amazon was suspected of charging different prices to its DVD customers based on their past buying behavior, many of its customers were outraged. "Amazon is over in my book!" was one of the more moderate on-line postings. In this case, a perceived deviation from fixed pricing was viewed as provocative and unfair. "I dont like the idea that someone is paying less than I am for the same product, at the exact same instant", as a reporter covering the Amazon story wrote.[33] Survey data has shown that most customers perceive paying a higher price than other customers as "very unfair"(Haws and Bearden, 2006) and at least one empirical study has shown that pricing differentials perceived as unfair by customers can lead to reduced demand (Anderson and Simester, 2008).

We need to be careful not to take the whiggish view that fixed pricing is an obviously superior and more fair modality to which markets automatically progressed. Certainly, it has not always been the case that "fixed pricing" was viewed as normative. In pre-revolutionary Paris, the police insisted that bread shops allow haggling in order to benefit the working poor (Kaplan, 1996; pp. 88-89). Nor is it the case that all buyers necessarily preferred or welcomed fixed pricing. Daniel Defoe felt that it was the buyers, rather than the sellers, who wanted to bargain.[34]

However, the idea that a fixed price is "more fair" than the differential prices that arise from bargaining is an old one. Quaker commercial behavior was in line on the injunction from George Fox that "...if a child were sent to their shops for anything, he was as well used as his parents would have been."(Kent 1990). In 1726, Daniel Defoe acknowledged the Quaker commitment to fixed prices while noting that insistent buyers often forced them to bargain: "but time and the necessities of trade made them (Quaker merchants) wiser, and brought them off of that severity, and they by degrees came to ask, and abate, and abate again, just as other business tradesmen do, though not perhaps as some do, who give themselves a fuller liberty that way." (Defoe, pg. y.) Fixed pricing was not necessarily welcomed by all buyers.

Certainly the early American merchant princes advertised their new fixed-price policies in egalitarian terms. Rowland Macy, himself a Quaker, echoed George Fox's sentiment, "By adopting one price and never deviating, a child can trade with us as cheap as the shrewdest buyer in the country," (Scull 1967, 83). With the advent of his one-price policy, John Wanamaker claimed that "New, fair and most agreeable relations were established between the purchaser and the seller, the poor and the rich, the wise and the unwise – there was no favoritism."(Wanamaker, 1911; pg 47).

[33] The quotes are from Phillips (2005), pp. 302 - 303 and pg. 312.

[34] "Indeed, it is the buyers that make this custom necessary; for they, especially those who buy for immediate use, will first pretend positively to tie themselves up to a limited price, and bid them a little and a little more, till they come so near the sellers' price, that they, the sellers, cannot find in their hearts to refuse it, and then they are tempted to take it, notwithstanding their first words to the contrary."(Defoe, pg. x.)

Many writers have shared the belief that the new system of fixed pricing was ethically superior to the bargaining modality that it replaced – even that it provided moral justification for the wealth gained by its practitioners: “Stewart, Wanamaker, Marshall Field, and a host of others who sprang up and flourished all over the country demonstrated that the retail merchant had a genuine and useful function to perform – fortunes awaited the merchant who served his customers by providing them with honest goods at honest prices. . . . And by becoming rich through honest methods they justified personal wealth as it had never been justified before.” (Crow 1943, pg. 151).

The rise of list pricing was accompanied by the increasing perception of haggling and bargaining as outmoded and declassé. In Victorian England, “bargaining for necessities” was something one’s servants did. In post-war America, buying wrapped meat at a fixed price was modern and middle class – haggling with the butcher was old-fashioned and lower class. This phenomenon is not confined to the developed world, in the 1970’s, Ralph Beals noted, that in Mexico, “. . . many people aspiring to higher social status in the city and larger towns (feel) that bargaining is demeaning. Such buyers are much less apt to bargain or shop around for lower prices if they feel that the offering price is fair.”(Beals, 1975; pg 201). Fixed pricing, on the other hand, seems egalitarian by nature – it is well suited for the modern democratic world of commerce where customers from all classes may rub shoulders while buying groceries at Safeway or Whole Foods.

The upshot of almost 150 years of fixed pricing is that consumers in most Western economies not only expect fixed pricing, the process of bargaining or haggling often makes them uncomfortable. The word ”haggling” itself has a pejorative connotation. “Besides, when you think about it, haggling is un-American.” a 2007 Business Week article declared. The same article noted that 65% of all car buyers (and 72% of women) say they would rather not bargain when buying a car. “Negotiating price just isnt in our culture,” according to consultant who is working with automotive dealerships to develop “haggle-free” auto selling (*Business Week*, 2007). Furthermore, fixed and fair prices seem to be part of the implicit contract that customers have established, at least mentally, with sellers. Bargaining can erode that understanding – “People soon lose confidence in a merchant with whom they can bargain, because they leave the store feeling that your goods are not worth what they paid for them . . . ” (Greenberg and Schindall, 1947; pp. 64 - 65).

5.6 The Future of Fixed Pricing

Outside the developed economies, bargaining is still an everyday activity for much of the population. Very often, fixed-price and bargaining modalities exist side-by-side. In 1983, Claire Robertson noted that, in Ghana, “Even in areas where one would not expect it, like imported goods, people occasionally bargained with storekeepers . . . Bargaining is such a way of life in Ghana that it cannot be eradicated by such annoyances as price controls” (Robertson, 1983; pg 479). An on-line guide to “Haggling and Bargaining in Gambia” recommends hard bargaining with all “market and street vendors" and at "goods shops" as well as whenever "...hiring the services of local skilled craftsman such as a plumber, bricklayer or construction contractor." On the other hand,

> Do not bother haggling over prices charged in the supermarkets, restaurants, bars, nightclubs, and 'Bitiks' as they tend to have fixed prices. Likewise don't bother with small items purchased from the local 'Pular' corner shop such as a packet of razors, insect spray, fruits, peanuts, purified water bags, bread or coffee. However, if you are approached on the beach by a fruit seller or other hawker then do ask for a reduction. If you have bought a lot of items in bulk from a supermarket then it is worthwhile asking them to reduce their price as they are often willing to offer a discount particularly to valued customers. If your room lacks any promised facility or you are intending to stay over 2 weeks then it might be worthwhile asking for a reduction of room rates.[35]

This broad description is a credible characterization of markets in many non-industrialized economies. In these economies fixed prices exist side-by-side with bargaining, just as they did in Paris prior to the advent of the *grands magasins*. As the relentlessly bargaining grocer, Madame François complains in Zola's *The Belly of Paris*, "Oh, these Parisians! They'll haggle for an hour over half a sou and then go and spend everything in a bar."(pg. 15). This passage implicitly contrasts the fixed pricing modality at the bar with the bargaining modality in the market. In "mixed" economies, natives know instinctively which transactions are customarily performed in which modality – visitors are not quite sure. This can cause disorientation and anxiety for visitors – should I bargain or not? Have I gotten a good deal? The bargaining and haggling skills that used to be needed to negotiate everyday transactions are disappearing from developed economies.

It seems highly likely that the fixed price modality will continue to gain ground at the expense of bargaining as many of these markets become more integrated into the global economy. Bargaining is not only "inefficient", it disadvantages the foreign buyer. Clifford Geertz observes that information in the bazaar is "poor, scarce, maldistributed, inefficiently communicated and highly valued"(Geertz 1978, pg 21.). And, "local sellers" typically have much more information about cost, competing prices, and market conditions than foreign buyers. It is likely that the pressure to sell on global markets will lead to continued expansion of fixed pricing into these markets. Within developed economies, fixed pricing or "haggle-free pricing" is making in roads into such traditional bastions of bargaining as auto-selling and real estate. It is not too difficult to imagine a future in which Edward Bellamy's dream of impersonal retail sales is fully realized on a global basis.

[35]http://www.accessgambia.com/information/bargaining-haggling-tips.html. Last accessed January 3, 2008.

6 Summary

Perhaps the most important message of this chapter is simply that *pricing has a history* – pricing modalities that we take for granted are not ahistorical and immutable, they have been strongly shaped by changes in technology, in institutions, and in broader societal attitudes. Pricing modalities can and will change – American retailers moved from bargaining to fixed pricing as the dominant modality in a period of less than two decades. Seemingly idiosyncratic or suboptimal modalities such as the upfront market for television advertising can persist and flourish through such major institutional changes as the end of the "big-three network" oligopsony and the rise of scores of competing channels. And, of course, the influence runs both ways. As list-pricing became dominant practice, it also became normative. The posted, fixed price – almost unknown before the American Civil War – became the standard for fairness.

Once established, pricing modalities can be quite stable over long periods of time – hence the persistence of the upfront market for television advertising and the "single price" policy for movie theaters. Industry pricing modalities rarely seem to change due to a bold move on the part of one seller. In fact, attempts by a single seller to unilaterally change pricing modality within an industry have a very mixed history. American Airlines is credited with successfully introducing advanced-booking discount fares into the airline industry. However, it spectacularly failed in its introduction of a simplified fare structure in 1992 when competitors such as Northwest and Continental failed to go along (Phillips, 2005; pp 319-320). Stelios Haji-Ioannou, who founded easyJet, tried and failed in his attempt to introduce more dynamic and differentiated pricing into movie theaters. Pricing modalities seem to come into being in times of institutional, technological, and regulatory changes such as the origin of the upfront market in the switch from sponsored programming to slot sales in the mid to late 1950's. Over time, a modality becomes embedded in the structure of a market. Expectations, institutions, and infrastructure are built up to support the modality as it is. In many cases, organizations not even directly involved in the transaction develop an interest in the preservation of a particular structure – just as equity analysts have an implicit stake in the continuation in the upfront market.

It is important for pricing analysts, pricing vendors, consultants and even academics to recognize that they are part of this process whether they are aware of it or not. The more that an organization invests in developing expertise in a particular modality, the more invested they become in the continuation of that modality. The immense investment that commercial airlines put into developing automated reservation and yield management systems unquestionably generated hundreds of millions of dollars in incremental revenue and profit. However, it also meant that the airlines were deeply invested (in both senses of the word) in a particular approach to managing prices in the marketplace – that of opening and closing discrete booking and capacity classes during the period of a flight booking. This may have left them more vulnerable to more nimble dynamic pricing employed by a new breed of low-cost competitors such as EasyJet.

Since pricing has a history, it has a future. As technologies, institutions, regulations, and societal attitudes change, so will pricing modalities. New modalities will arise in conjunction with new markets and market opportunities. A clear example of this is the "keyword auction" market for Internet advertising described by Atherton and Vudali in this volume – a market in which pricing rules are still in flux and the details of the final "equilibrium" modality are still undetermined. These situations present an opportunity for economists, sociologists, and historians to be "present at the birth" and gain a better understanding of how pricing modalities emerge, how they change, and how they become locked it. Ultimately, this should give us a better view of the complex and multi-form interactions among economic institutions and social and historical changes.

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