

Free, Bundled, or Personalized?

Rethinking Price and Value in Digital Distribution

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The digital media economy is home to an unprecedented variety of pricing models, each of which invites us to value media commodities differently. From “free,” freemium, and subscription-based services through to personalized and auction-based pricing, digital media have become a crucible in which new ways of valuing culture are invented, adapted, and normalized.

The purpose of this chapter is to provide a conceptual framework for understanding recent price transformations in digital media. Along the way, I also propose some analytical connections between professional and policy debates about digital media pricing and critical concerns raised by media distribution studies. I am thinking here especially of the work of Nicholas Garnham, who, in his important book *Capitalism and Communication* (1990), placed distribution at the very center of communication scholarship. For Garnham, the central issue in distribution was “the function not just of creating a cultural repertoire matched to a given audience or audiences but at the same time of matching the cost of production of that repertoire to the spending powers of that audience” (162). The present chapter builds on this provocative but largely underdeveloped line of inquiry into pricing as a central plank of distribution research, asking the following questions: How do we as media scholars make sense of the proliferation and coexistence of diverse price points for the same goods? How are long-standing pricing techniques (such as subscription) and institutions (such as the lending library) being repackaged for the digital age? How should we evaluate current claims about the digital “devaluation” of cultural production?

The guiding premise of this essay is that price—a fundamental yet obscure topic within media and communication studies—has both critical and practical value for current debates about digital distribution. First, price is integral to questions of media access and availability. Audiences are differentially included and excluded from accessing content based on their ability and willingness to pay. This has a clear policy implication because the cost of media is a vital element in debates about media affordability, expenditure, participation, and piracy (McCombs 1972; Karaganis 2011; Park 2017; Thomas et al. 2018). Second, analysis of pricing also has a practical value for media professionals seeking to assess the value and set the price of their product in particular markets. At a time of profound transformation of many media industries, it is important to reflect on the wider social and cultural consequences of the many different ways of pricing media—and what this means for how we as consumers understand the value of media in the marketplace and in our everyday lives.

Before we begin, a point of clarification regarding the term “media.” This article makes a distinction between the pricing of *media content goods* and the pricing techniques enabled by digital *media systems*. The first half of the article is concerned primarily with media content goods, specifically certain classical commodity forms associated with publishing, cinema, and recorded music: books, movies, tracks, and albums. My focus in this part of the chapter is on price as defined at the point of consumption in business-to-consumer transactions. In the second half of the chapter I expand the scope of the argument to include digital *media systems*, including pricing optimization software and distributed ledger technologies that enable novel, automated ways of pricing goods. The chapter concludes with a case study of a controversial pricing practice: algorithmically personalized pricing.

The Specificity of Media Pricing

Price and pricing are foundational concepts within economic thought. Marxist economic theory has long been concerned with commodity pricing and exchange value, while neoclassical economics has focused on the role of price in coordinating production and consumption (Hayek 1945; Friedman 1962). Price is also central to subfields such as

information economics, media economics, and media management (Shapiro and Varian 1999; Reca 2006). A rich literature can also be found in economic sociology and anthropology, where scholars have focused on the social and cultural contexts of price setting and price awareness among consumers (Velthuis 2005; Guyer 2009; Beckert and Aspers 2011). However, less attention has been paid to the topic within media studies, including media industry studies. Consequently, price is often dismissed as something purely instrumental, of concern only to industry and media business scholars, rather than a larger socio-economic topic with implications for media production, distribution, and consumption.

One possible reason for this is the fixed-price character of many media goods, specifically the professionally produced content that is our focus in this section of the article. The structure of publishing, cinema, and recorded music, in particular, is unusual from an economic perspective because there is so little price differentiation between titles or artists. At the cinema one generally pays the same amount to see a blockbuster or a low-budget indie film, although ticket pricing may vary by time of day (matinee or evening screening) and theater type (first-run versus second-run theaters). Similarly, prices of new-release paperback books are broadly comparable regardless of whether you are buying a Booker Prize-winning novel or an obscure novel by a first-time author. As these examples suggest, competition in consumer markets between media goods is not often waged on the basis of price (Ballon 2014). Instead, historical and institutional factors are generally more important in determining prices, which vary between categories of media goods rather than individual titles.

The topic becomes more complex when we take into account the plethora of formats in which media goods are distributed, along with the complex release sequencing strategies used in many media industries. For example, book pricing follows a versioning model in which hardbacks are expensive, paperbacks and e-books are affordable, and remaindered books are very cheap. This is, in effect, temporally differentiated pricing, where newer content attracts a price premium. Similarly, the well-established windowing model of film distribution means that the price of a movie will vary significantly depending on when and where you see it, whether on opening night at the multiplex or years

later on DVD or via a streaming or download service. Even within the home entertainment window for movies, multiple versions of the same film are often available at different price points, from standard-definition DVDs or streaming movies through to premium Blu-ray versions. In other words, while price differences between texts are generally insignificant, prices for the *same* text may vary considerably depending on the distribution channel, the age of the work, and the specific affordances of the format or version, such as picture or audio quality. As Jeff Ulin (2009, 252) observes, “Managing price is an art, not a science, and is influenced by factors such as the nature of the title, the competitive environment, retail pressures, inventory in the market, seasonality, life-cycle promotional opportunities, and rebate programs.”

To add further complexity, media goods are often available within both formal and informal markets. For example, a Beyoncé album can be purchased from Walmart or streamed via Spotify or Apple Music, but its tracks can also be illegally downloaded via BitTorrent or ripped from YouTube. In many countries, the album will also be available at street markets and informal stores as a pirated CD or collection of MP3 files transferred to the consumer’s mobile phone via Bluetooth. For a holistic understanding of the media economy, we need to consider price differences *across* these formal and informal markets, as well as within them (Karaganis 2011; Lobato and Thomas 2015).

Price in Time and over Time

Media pricing can be approached from both synchronic and diachronic perspectives. In other words, we can study prices at particular *moments* in time or over a *period* of time. The synchronic perspective typically reveals a diverse ecology of coexisting price points for the same goods, usually determined according to format and version differences. In contrast, a diachronic perspective reveals how pricing structures wax and wane over time, as different ways of distributing, valuing, and packaging media go in and out of fashion.

Consider the current prices for back-catalogue movies within the U.S. home video market. Table 16.1 shows pricing as of early 2019 for Quentin Tarantino’s *Kill Bill: Vol. 1* (2003). As the table shows, *Kill Bill* is presently available to U.S.-based consumers in a wide array of digital formats,

each underpinned by a different business model such as transactional purchase, transactional rental, subscription bundles, and piracy. This pricing structure allows for diverse entry points based on consumers' willingness and ability to pay. While newer releases are priced differently, the pattern below is typical of older back-catalogue movies. Consumers in the United States can digitally rent *Kill Bill* for a few dollars; they can purchase it as a digital download, DVD, or Blu-ray disc for a few dollars more; or they can download it for free via BitTorrent. They can also, at the time of writing, stream it from Netflix for monthly subscription payments of between \$7.99 and \$14.99, bundled with thousands of other titles. Across these various distribution channels, the price of *Kill Bill* ranges anywhere from \$0 up to \$14.99. In other words, price in this instance is determined less by the qualities of the text and more by the affordances of the distribution channel, including picture and sound quality, scarcity and novelty of format, and resale potential.

TABLE 16.1. The Variable Price Points of *Kill Bill: Vol. 1* (February 2019)

| Price | Distribution channel |
|---------|---|
| Free | Pirate torrents and streaming sites |
| \$2.99 | Digital rental (SD) via PlayStation, Microsoft Movies |
| \$3.99 | Digital rental (HD) via Amazon, Google Play |
| \$4.00+ | Secondhand DVD purchased through eBay |
| \$7.99 | Digital download (SD) via Vudu |
| \$12.99 | Digital download (HD), purchased through iTunes |
| \$14.99 | Blu-ray disc purchased at retail store |

Prices for media content goods typically vary between and even within countries. Geographic price differences are a contentious issue, especially for consumers outside the major media markets. In low-income countries especially, formal media goods are often pegged to first world prices and may be quite expensive for locals (Karaganis 2011). The monthly subscription prices of global video-on-demand and music streaming services are likewise often calibrated to rich nations (Lobato 2019; Lobato and Meese 2016). This geographic dimension of media pricing is not the main focus in the present article, yet it remains a contentious issue for consumers and policy makers in many countries. For our purposes it is enough to simply observe that the price for *Kill*

Bill, as described above, seems to be anchored not primarily in a fundamental argument about the “value” of Tarantino’s film, but rather by the film’s movement through a temporal sequence of release windows and formats. In other words, the price of *Kill Bill* is elastic: it expands and contracts depending on distribution channel. This is one of the characteristics of media distribution generally, but it is especially characteristic of digital distribution, which tends to highlight this fundamentally uncertain relationship between price and value.

A diachronic perspective reveals how pricing structures change over time in response to evolving social mores, technologies, and regulation. To understand why new-release movies all cost the same, for example, one must consider the historical evolution of mass-entertainment markets since the turn of the twentieth century, including the relationship between cinema and fixed-price leisure attractions such as nickelodeons. Similarly, one must take into account wider societal norms regarding acceptable and unacceptable pricing practices. For example, while most consumers today think of fixed, open pricing—the same price for every customer—as a basic norm of market exchange, this practice became widespread only in the late nineteenth century following the expansion of organized retailing and department stores (Turow 2017). Prior to this, prices were generally improvised, opaque, and contestable. Traders would size up a customer and set the price accordingly, perhaps using a code noted on the product to remind them of the wholesale price. These traditions of flexible pricing persist in many bazaar and informal economies today. A diachronic perspective thus reveals the historical contingency of established practices, allowing us to see changes over time in the pricing of individual commodities as well as long-term, systemic changes to entire media markets.

The recent history of recorded music distribution offers a unique case study in price transformation. During the 1990s, music was bundled into albums, sold on CDs, and available for free through ad-supported radio and public broadcasting. The advent of Napster and other file sharing services significantly increased the informality of music distribution: peer-to-peer exchange and paid consumption visibly coexisted. In 2003, Apple attempted to re-commodify digital music by offering fixed-price paid downloads of individual tracks. Then, in the 2010s, the price point of music shifted again as monthly subscriptions to streaming services

became the new normal for many consumers. In other words, the dominant pricing logic shifted over the course of a generation from bundled, to free, to unbundled, to re-bundled—while coexisting with an array of residual pricing models that often clashed in their different propositions about what music was worth. It is no wonder, then, that consumers are confused about the value of music and whether or not this is a “good” that should be paid for or can be consumed at no charge. This price volatility is especially stark given that pricing for live music concerts follows a different logic, with variable ticket prices according to the status of the artist and the quality of the seat or location (front row, back row, or standing room).

Jeremy Morris, in *Selling Digital Music, Formatting Culture* (2015), offers a powerful analysis of music’s pricing crisis at the end of the past century. As Morris argues, Apple’s intervention into the digital music market helped to stabilize the price—and therefore the perceived value—of music during a period of great turbulence. iTunes’ signature innovation was to sell song downloads at a flat rate of \$0.99, which was seen by Apple as a price point “high enough to start generating revenue for digital music yet low enough to appeal to customers who were getting accustomed to ‘free’ music” (Morris 2015, 151). Apple later introduced two additional price points for digital song downloads (\$0.69 and \$1.29), to allow labels some room to differentiate their product. However, it was the \$0.99 price point that instituted a new cultural norm.

As Morris (2015, 134) observes, Apple’s strategy aimed to “rebuild some of the value that drifted during the migration from music on CDs.” It also had the effect of reinforcing the fixed-price character of recorded music markets, so that every song cost the same: “Bob Dylan, Luciano Pavarotti, Celine Dion, the Born Ruffians, and my friend David Myles: all \$. 99. These artists may be ‘worth’ different things to different customers, but the lack of price fluctuation, at least initially, suggested they were all equal economically. The fact that an unknown independent thrash metal band could sell its song for the same price as a Rolling Stones classic was, in many senses, egalitarian” (Morris 2015, 152). The complex history recounted by Morris in his book has many national and regional variations (Straw 2000a, 2000b). The Japanese still buy CDs, for example, while India’s music economy is known for its low-cost, mobile-phone-based distribution model. However, the basic point

is worth emphasizing. In many nations, the dominant pricing logic of recorded music has changed *three times within a generation*. These price transformations are commonly glossed over when we talk about digital disruption, but they are fundamental to how consumers experience and value music.

Pricing change is never teleological, but rather the end result of disruption, experimentation, and eventual alignment of pricing practices. Nor are the dominant logics described above all-exclusive. At any point in time, a variety of different pricing models exist behind the one that rises to dominance. Even today when streaming is dominant, the other models remain. For example, recent industry research (IFPI 2017, 4) suggests that “on average, consumers [globally] listen to music in four different licensed ways,” drawing from a wide range of options including radio, paid streaming, free ad-supported streaming, and paid downloads. Hence, we must be careful not to envision change as a linear evolution from A to B to C (or from analog to digital) when in fact it is a more gradual and uneven process of reconfiguration.

Every pricing practice has its own history. The free exchange model of Napster evoked a longer tradition of tape-swapping. Subscription streaming services take their cues from older subscription models such as lending libraries and video rental stores. Spotify, with its free and premium tiers, has two different pricing models built into the same platform, evoking radio and library traditions simultaneously. Individual song downloads also have an earlier precedent in vinyl singles and cassette singles. Around the edges there are pricing experiments, such as Radiohead’s pay-what-you-want release of *In Rainbows* in 2007, bundling of music with products and services (preinstalling U2 albums on Apple devices), and secondhand MP3 marketplaces (ReDigi). Hence it is important to account for the coexistence and interdependence of pricing models while noting the points of obvious rupture. Television is another interesting case. The advent of subscription video-on-demand services such as Netflix, whose users pay a fixed monthly price for unlimited streaming, has changed the value regime around television. The effects of this change vary according to the prior pricing norms that applied in particular countries. For consumers in countries where pay television (cable/satellite service) is the norm, as in the United States, Netflix’s price point is likely to appear tantalizingly cheap in comparison to a monthly

pay TV package. In these contexts “cable-cutting” or “cable-shaving” is therefore an attractive proposition. However, consumers in countries with strong free-to-air and public-service broadcast traditions, such as the United Kingdom and Japan, where the expectation is that television is a *free* medium, are often less comfortable with paying for television services because this departs from a long-standing historical norm about what television is and how it should be consumed and financed.

TABLE 16.2. Coexisting Consumption Models for Music and Their Corresponding Pricing Structures

| | | |
|-----------------------------------|--------------------|---------------------|
| Radio | Free | Formal |
| MP3 sharing | Free | Informal |
| Pirate streaming / stream ripping | Free | Informal |
| Video sharing (YouTube) | Free | Formal and informal |
| Physical (CDs, vinyl) | Paid—transactional | Formal and informal |
| Download services | Paid—transactional | Formal |
| Streaming services | Paid—subscription | Formal |

In other words, the overall effect of subscription streaming services on how consumers value television can be read in at least two ways: as a devaluation or as an upward ratchet to television’s price point. On the one hand, subscription streaming services like Netflix may appear very cheap when compared to the premium prices historically charged for cable and satellite pay TV. On the other hand, they appear expensive when compared to free public service and commercial broadcast television. The reaction of consumers to new digital services will therefore always be conditioned by local historical norms of television pricing and availability.

Experimental Pricing Models in Digital Media

So far, we have considered prices for professionally produced media content distributed through digital channels. Yet “media” can also be defined in a more expansive sense to include all the digital, logistical systems that facilitate distribution (Parks and Starosielski 2015). In this more expansive definition, an analysis of the relationship between media and price must also take into consideration how prices are determined,

measured, and communicated using digital technologies. This section of the chapter therefore shifts our focus away from digital media *goods* toward digital media *systems*.

In a provocative essay, sociologists Liz Moor and Celia Lury (2018) analyze some emergent pricing technologies and their applications. As Moor and Lury note, “Systems of ‘personalized’ pricing, ‘fluctuating’ pricing, ‘dynamic,’ or ‘surge’ pricing are on the increase,” and some retailers now change the prices of many goods on a near-constant basis, with the effect that the price of certain goods might rise or fall several times in a day. Moor and Lury also note the appearance of pricing based on automated analytics of user behavior data, loyalty card schemes, membership-based pricing, pricing techniques informed by behavioral economics, and “experiments with ‘live’ and fluctuating prices for energy” (Moor and Lury 2018, 506).

Digital platforms have been integral to this normalization of price experimentation. Transport and e-commerce platforms have familiarized consumers with auction pricing (for example, bidding on an eBay auction) and dynamic surge pricing (where prices are automatically adjusted in real time according to supply and demand, as with Uber rides). The massive expansion of web advertising since the 1990s has also introduced another, highly complex pricing mechanism—real-time bidding on ad insertions. Real-time bidding is an automated auction system where advertisers bid on the opportunity to place web and app advertisements in front of particular users. The whole process is complete within milliseconds and has traditionally been based on a “second-price” auction model, similar to an eBay auction, where the final cost of the ad is equivalent to the second-highest bid. This pricing system was famously developed by DoubleClick (owned by Google since 2008) and has been integral to the standardization and automation of internet advertising over the past decade.

Other digital media platforms and services have breathed new life into older models. Facebook and Google have embraced the “free” price point historically associated with ad-funded broadcast media: they do not charge consumers directly for their search and social network services and run ads instead. In so doing, these platforms have triggered a far-reaching conversation about transparency and consumer consent when using ostensibly “free” services. (Of course, services like Gmail

and Facebook are not really free but are offered in exchange for user data and attention.) A different example is the crowd-funding platform Kickstarter, which allows fans to contribute to various projects at fixed or variable price points (e.g., ten dollars for an entry-level donation, fifty for a “superfan” package), thus recasting price as benevolent patronage. Meanwhile, Patreon invites consumers to see payments to artists as a form of tipping.

Around the edges of the digital media industries one can also find other experiments and innovations. Some of these may become normalized over time, while others are likely to prove more ephemeral. For example, there is now significant investment in micropayment and subscription technologies that can efficiently bundle digital news content in new ways, with the implication that news could be priced per article. The New York-based company Sourcepoint, among others, is developing a “content compensation platform” that allows users to take out bundled subscriptions across various news sources (e.g., major Australian or West Coast U.S. newspapers) and then redistributes those revenues to the participating publications. The idea behind subscription “super-bundles” such as this is to more accurately allocate subscription revenue based on what the user has spent most time with, while also offering an alternative to individual title subscriptions. These super-bundles are the latest twist in the pricing crisis that has gripped the newspaper business over the past two decades. The end result of this crisis has been a bifurcation in business models whereby newspapers transform into either freely accessible ad-supported online mastheads or paywalled premium titles, such as the *New York Times*, which may offer a small number of article views before imposing a paywall. The super-bundle model is an attempt to resolve this pricing crisis through a micropayments model, as an alternative to the existing subscription-and-paywall or free-with-ads models.

Video game distributors have been especially inventive with their approaches to pricing. For example, the platform Humble Bundle offers curated collections of games and associated content such as artwork, stories, and merchandise on a pay-what-you-want basis. Users set their own prices, with tiered levels of access (although higher payments are needed to unload the full bundle). Users also decide how much of the price to allocate to authors/developers, to the platform, and to charity.

E-book platform Story Bundle provides a similar service for independent genre fiction.

Another recent development in pricing is the emergence of business software packages that automatically calculate and set prices without direct human intervention (Gal 2019). The software package Inoptimizer, for example, offers “end-to-end pricing automation” designed to “optimize . . . pricing and assortment across categories in real time,” using artificial intelligence to analyze competitors’ prices, historical pricing datasets, and Inoptimizer’s own market research, so that vendors can adjust their prices automatically to increase yields or stand out in the marketplace. Another example is Feedvisor, a “repricing” product designed specifically for third-party vendors using the Amazon marketplace. Feedvisor allows its users to automatically monitor competitor vendors’ pricing and adjust their own prices in real time. Services such as these can be purchased off the shelf, allowing businesses of all sizes to access the kind of advanced digital pricing capability that would previously have been restricted to very large enterprises. The availability of these software packages is likely to contribute to a general shift toward more dynamic pricing of goods, so that prices may fluctuate as needed over time, rather than remaining fixed at a familiar price point.

The emergence of distributed ledger technology has also enabled new pricing experiments. The most well-known ledger technology is blockchain, which allows advanced and automated allocation of revenues according to “smart contracts” (i.e., self-executing contracts that can be programmed to distribute payments without the need for manual processing). Blockchains are now being used to support a wide variety of digital distribution start-ups, including video platforms such as DLive that encourage donation-like micropayments to video creators. A different example of a blockchain-based media service is the Brave open-source browser and associated currency (the Basic Attention Token, based on the Ethereum blockchain), which seek to efficiently price consumer attention to advertising. Brave users pay with their attention and receive blockchain-based tokens in return, which can be donated back to the users’ favorite publishers. The Brave browser, which also includes an advanced ad blocker, promises to inaugurate a new kind of pricing norm for user attention, designed to be more transparent and equitable than the current alternatives found in the digital advertising market-

place (such as the opaque trade in consumer data that underpins real-time bidding on web advertisements). In this sense, services like Brave can be seen as experimental attempts to resolve some of the inequities of pricing and value that underwrite existing media business models.

Experimentation and innovation in pricing also occur in the informal media markets. While “free” remains the dominant price point of digital piracy, there are actually many different pricing models within informal media distribution. Ad-funded free services (e.g., pirate video streaming sites and apps) are distinct from commons-based free systems such as BitTorrent. Within the internet pirate economy one can also see transactional pricing experiments (e.g., *allofMP3.ru*, the famous low-priced pirate MP3 store) and low-priced subscription models (e.g., cyberlocker cloud storage platforms, where a cheap monthly subscription gives access to unlimited user-uploaded content).

As these examples suggest, digital media have enabled very diverse pricing models, reflecting the wider price experimentation diagnosed by Moor and Lury. Digital funding platforms such as Kickstarter also offer new opportunities for consumers to buy (or buy into) a media good at different points in its production chain: as investor, user, or supporter. Often, these new practices arrive in a blaze of hype accompanied by claims of revolutionizing certain industries or overthrowing long-established industrial practices. But the sophistication of the pricing system is only one factor among many others. The most cutting-edge pricing system is not necessarily the same one that users will trust, institutions will adopt, or producers will consider optimal for monetizing their goods. Media industries are more complex than this and are subject to the same kind of long-term lock-in effects that characterize most industries.

Algorithmic Price Personalization: Digital Discrimination or Supreme Efficiency?

A final consideration is the potential of digital media to enable new forms of price discrimination among consumers. In online commerce, the automated modification of prices based on information about individual customers is becoming increasingly widespread, with the effect that different customers may be offered different prices for the same

good. Prices can be adjusted in real time based on a range of variables, including IP address; the customer's purchasing history; third-party data profiles (typically assembled by online data brokers); online search and browsing history; device type; operating system, language, and region settings; and behavioral attributes such as responsiveness to ads and click-through speed. Digital pricing personalization is still a nascent practice and is not yet widely used in media content goods retailing. However, the technologies enabling price personalization are increasingly pervasive and affordable for small businesses as well as large corporations. Price personalization is therefore an issue that may increasingly impact all industries, including media industries, in coming years.

The OECD (2018, 5) defines price personalization as “a form of price discrimination in which individual consumers are charged different prices based on their personal characteristics and conduct.” Discrimination is used here in the economic sense to refer to price variation (although these practices are also linked in complex ways to social processes of discrimination, as we shall see below). Price personalization is attractive to theoretical economists because it enables maximization of revenues from customers with different willingness to pay. For example, personal data about past shopping behavior can be used to gauge a prospective buyer's reservation price: “Just as someone's clothing can provide pricing clues, so can the manner in which a customer accesses an online store. Is a shopper using a laptop, app, desktop, or internet on their smartphone? What operating system are they using? Where are they located? A customer's actions also provide pricing clues: What other products are they looking at? How many times have they visited the site? Much like car salespeople, web retailers can electronically evaluate the characteristics and actions of each shopper to create a profile that generates a personalized price” (Mohammed 2017).

Personalized pricing has been used within the airline industry for many years, and the practice also has a long history in insurance. Its adoption in consumer retail markets has been more limited (European Commission 2018), despite some well-known cases that have attracted media attention. Amazon, a company known for its adoption of advanced data analytics, experimented with personalized pricing in the early 2000s but stopped after a backlash from customers. Uber has been

known to charge different customers different prices for the same route, based on perceived willingness to pay (OECD 2018, 17). AirAsia likewise has experimented with personalized excess baggage prices, “using data and machine-learning to better understand what passengers were prepared to pay for” (Freed 2017). In addition, it is very common for retailers to arrange and promote products differently on the home screen, based on the consumer’s data profile and online behavior. Research by the European Commission (2018, 1) has shown that 61 percent of retailers practice “personalized ranking of offers, either based on information about the shoppers’ access route to the website . . . or past online behaviour.” The commission concluded that this kind of personalization can harm consumers “if it is used to steer them towards the most expensive products that they are willing to pay for” (6).

Another form of price personalization involves adjusting prices downward for price-sensitive customers, for example, by offering a small discount to new customers (“10% off your first order”). In such cases, browser cookies and mobile IDs are used to establish whether the user is a first-time visitor or a regular shopper, and prices are adjusted accordingly. This kind of personalization is generally considered benign, but the practice becomes highly controversial when prices *increase* as a result of personalization. A related risk is that price personalization can be used to “identify ‘high value’ and ‘low value’ consumers,” thus presenting risks for disadvantaged consumers who may effectively be charged higher prices because they are not considered worthy of discounts (Nguyen and Solomon 2018, 24).

The major factor inhibiting the further spread of algorithmic price personalization is consumer distrust of this practice. In contrast to fixed pricing—with its connotations of equality, fairness, and transparency—personalized pricing is associated with opacity and deception. While many consumers are blissfully unaware of the behind-the-scenes calculations described earlier, few things are more upsetting to a consumer than being charged a higher price than the next person, especially when this process is based on analysis of personal data. Personalized pricing thus raises the ugly specter of discrimination.

A significant body of research exists to show socially disadvantaged groups are often disproportionately affected by opaque and negotiated prices. For example, a major study by Ayres and Siegelman (1995) showed

that black and female customers in Chicago's used car market were offered significantly higher final prices than white men. While used cars and media commodities are inherently different, the principle of vendors asking for "as much as they can get away with" still applies and remains a basic feature of capitalist exchange whether in a face-to-face or digital setting. Price personalization is therefore contentious because it appears to extend the long-standing tradition of salespeople sizing up a potential customer—but using big data instead of visual and social cues.

The implications of personalized pricing are significant and could potentially flow through into many different media industries. The more complex effects relate not only to consumer welfare but also to the competitive advantages arising from the use of big data. Antitrust regulators, civil society groups, and legal scholars have been paying close attention to algorithmic pricing, including price personalization, in recent years (OECD 2018; Ezrachi and Stucke 2016; Nguyen and Solomon 2018). Pricing is central to several areas of antitrust law, including cartels and price fixing, so there is now increasing concern among regulators that algorithmic pricing technologies may enable novel forms of price coordination that extend older forms of anticompetitive or collusive conduct between firms.

A key issue here is access to customer data. Major online retailers such as Amazon and multifaceted digital service providers such as Google are in a unique position to use price discrimination to their advantage because of the rich data they hold regarding their users' online purchases, interests, or behaviors. Such data allow intimate knowledge of users' consumption habits and, by extension, their likely willingness to pay. Access to these data gives firms a competitive advantage in the sense that they can calibrate prices with a level of sophistication that other online retailers cannot rival.

In summary, algorithmic price personalization presents many risks and unknowns that are rightfully attracting scrutiny from consumers, civil society groups, and regulators. Certainly, the efficiency benefits of personalized pricing should not automatically be discounted. Many economists would argue that calibrating prices to willingness to pay allows poor consumers to be offered lower prices than would otherwise be possible in a fixed-price system. Proponents of the practice also point to the many free technologies available online that allow consumers to

shop around and compare prices (for example, price comparison websites like camelcamelcamel.com that provide historical price data and price-comparator browser extensions like Honey). At a minimum, policy reform in this area could focus on increasing the transparency and accountability of personalization by requiring retailers to explain how they set their prices and what kinds of data they use to do so. In the absence of such transparency, it is likely that price personalization will remain somewhat disreputable among consumers. While the impact of these price personalization techniques and the digital media systems supporting them has not been felt widely across markets for media goods, media goods markets have the potential to be affected alongside other areas of the economy. This would pose new and difficult questions for foundational concepts in media economics and policy, by radically complicating assumptions about the relationship between media price, access, and affordability.

Conclusion

This chapter has taken a selective tour through some of the issues that the topic of pricing raises for media industry research. As we have seen, prices are among the most familiar and mundane attributes of media goods; yet pricing, as a socioeconomic process, has obscure and fascinating dimensions that relate directly to many long-standing concerns of media scholarship. Prices for everyday media goods are *historical* because they build on long-established norms of distribution and retail practice; they are *cultural* in the sense that they embody, extend, or contest assumptions about the value of media; and they are *governmental* in the sense that they do certain kinds of work and are subject to direct and indirect regulation, while acting as a form of control in their own right. Prices are never simply plucked out of thin air, in other words. As Pierre Bourdieu (2005, 197) observes, “It is not prices that determine everything, but everything that determines prices.”

This chapter has provided some analytical entry points into the topic of pricing for media industry scholars. I have made a distinction throughout between the pricing of *media goods* (books, music, movies) and the pricing techniques enabled by digital *media systems*. Both dimensions of the issue are relevant to media studies, but in different ways.

On the one hand, questions of media affordability, access, and inclusion remain evergreen concerns for scholars, as well as for regulators and policy makers. On the other hand, media studies must also attend to the more diffuse ramifications of digital media systems on diverse areas of the economy and social life. Phenomena such as personalized pricing, auction-based pricing, price comparison websites, and blockchain-based pricing experiments provide suggestive examples of what is enabled by “media,” defined in the logistical sense (Rossiter 2016).

With all this in mind, we can now ask, what might a future media studies research agenda into pricing look like? What avenues of inquiry are most productive for understanding pricing as a cultural and historical (as well as professional) practice? Let me conclude with a few rough thoughts, expressed in the form of four potential research questions that can be usefully asked of any particular case study.

The first question—*how much does it cost?*—appears straightforward but is in fact fiendishly complicated. Questions to ask here include the following: Is the price fixed or variable—and according to what principle (geography, demography, distribution window, format, version)? Can the good be found at a lower price point in secondhand markets, informal markets, remainder markets, and parallel-import markets? If so, what does this co-existence of price points reveal about the way that good is valued by industry and by consumers? Questions such as these draw attention to the synchronic plurality of the price, if it exists, or alternatively to the work involved in stabilizing a particular price.

What is the history of the price? The second step is to consider the diachronic plurality of the price. How has the price changed over time? How stable or volatile has that price point proven to be? Does it build on, reformulate, or challenge longer traditions of pricing, and their underlying business models? What prior traditions and practices have contributed to how this price point is understood by consumers? Asking these questions allows us to see prices as artifacts carrying historical connotations and associations. It also opens up possibilities for historical research into media pricing, using archival sources to understand the diachronic variability of prices for particular media goods and wider media markets.

What are the social consequences of this price point? The third step is to ask what the price means for consumers. This is where questions of

equity and access come in. Who is included and excluded when media are priced in a certain way? How does the price point position the good as a mass, niche, or premium product? What are the implications of this wide or restricted availability, in terms of media access and diversity? How do these distribution conditions shape any possible civic or political claims made by producers of those media goods? What commercial or social trade-offs and positioning lie behind the chosen price point?

What is the infrastructural context? Finally, research can investigate the various systems involved in creating a price, changing it over time, and communicating it to potential buyers. In other words, scholars may consider the infrastructural and logistical role of digital media (including platforms, software, spreadsheets, and auction systems) within these various processes through which price is materially produced. What technologies are involved in the calculation, display, or dissemination of the price? What combination of human and algorithmic knowledge lies behind the price? How transparent or (in)accessible are these knowledges, and what are the competition implications? Who creates pricing systems and under what conditions? Questions such as these draw our attention to the politics of what might otherwise appear to be neutral technologies and remind us that price is always more than just a number.

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