

Hutter, Michael

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The Low End of High-Tailed “Toys.” Sequences of Markets for Cultural Goods

Michael Hutter

1 POWER-LAW DISTRIBUTIONS OF SUCCESS: FROM HIGH END TO LOW END

Skewed probabilities in physical, biological and social phenomena have been observed since the late nineteenth century. Vilfredo Pareto was first to observe that the observed entity—in his case, annual monetary income per family in various European countries over the course of centuries—was not distributed normally throughout the population, but that the “upper tail” showed a distortion, roughly expressed by the rule that 20% of the population receive 80% of the total income.¹ Similar asymmetric distributions were found for the distribution of words in languages and in literary texts,² in the size of urban agglomerations and in organisms.³ Robert Merton, eminent sociologist, coined the name “Matthew effect” for the “cumulative advantage” of successful scientists, with success measured by

¹ The first version is found in his *Manuel d'économie politique* from 1909, reprinted in Pareto (2014, p. 194).

² See Zipf (1949) and Yule (1925).

³ See Fox Keller (2005).

M. Hutter (✉)

Berlin Social Science Center (WZB), Berlin, Germany

e-mail: michael.hutter@wzb.eu

their “symbolic and material rewards” (Merton, 1988).⁴ The parametric mathematical form of all these distributions is a function that increases in value with the “power” of its exponent:

$$f(y) = a \cdot y^{-\alpha}$$

The data in the studies cited follow such a “power-law”- or “Pareto”-function,⁵ at least in their upper part, where most of the value, economic or otherwise, is concentrated. The values measured for the exponent cluster around 2, indicating the slope of a linear function in logarithmic form.⁶ More than a hundred distributions that follow a power law function have been identified, in sciences ranging from astronomy to neural networks.⁷ The network structure of the diverse phenomena seems to be the unifying characteristic.

In the sphere of economic activities, power law distributions have been mostly observed in financial markets. Hudson and Mandelbrot (2004) found large variations of price changes that fit a power-law pattern.⁸ They explain the operation of these markets as a series of incessant booms and busts. The turbulences follow a power-law pattern, with peaks on the local as well as on a national level. Ijiri and Simon (1977) showed that the pattern holds also for the sizes of firms in

⁴ The source for the name is a line in Matthew 25.29: “For to everyone who has will more be given”. The meaning of the phrase shifts when the previous sentence is considered. “You ought to have invested my money with the bankers, and at my coming I should have received what was my own with interest,” chides the returned master the servant who has not invested his “talents”—historical monetary units, later generalized to any kind of human capability. Matthew’s divine author encourages capital accumulation, he does not express a natural law of exponential growth.

⁵ The relationship has been given many names. “Pareto function”, an honorary attribution to the pioneer, is the one most frequently used. The Pareto function is the most commonly used parametric format out of a larger set of exponential functions. See Mitzenmacher (2003).

⁶ For a series of visualizations of power law distributions in popular media, see <https://github.com/taubergm/Powerlaw>, with sources for the visualizations in Tauberg (2018). Because revenues are distributed across a wide range, from 1 to several million units, log-log-formats are frequently chosen by researchers. See Mitzenmacher (2003).

⁷ See the Wikipedia entry for “Power law”.

⁸ The markets investigated include IBM shares, railroad stocks, currencies and commodity exchange markets, like the cotton market.

industries.⁹ In markets for cultural goods, Pareto distributions came into play because of the “superstar phenomenon” in sports, music and fiction literature (Rosen, 1981; Adler, 1985). Since “bestsellers” and “blockbusters” were the focus of these studies, they concentrated on the skewed high end of the respective markets.

The prominence of the phenomenon in financial and in cultural markets is due to the nature of their products: in both of them, information is generated and travels in communication networks. In financial markets, new information shapes expectations for future prices of assets. Cultural goods are purchased because they contain messages that entertain their recipients. Videogames, sports events, music festivals or indigenous craftworks do not enter or manipulate their users physically.¹⁰ They enter them mentally, as they are registered through one or more of the five senses. Information has properties that distinguish such goods from physical commodities, and which inhibit the formation of commodity markets: messages are inherently abundant, they can be accessed by many, and they are singular yet interconnected by meanings and narratives (Hutter, 2020). Their singularity is due to their temporal nature: they must be, in some sense, “new”, thus uncertain and potentially surprising (Shackle, 1953; Hutter, 2011). New messages in cultural goods are addressed to the members of their audiences, which include all those who can decode and enjoy their qualities. All the members, spectators as well as actors, participate in a specific, highly institutionalized game of appreciation. The cultural goods serve as “toys,” as *Spielzeug* (stuff to play with) in the cultural games that make up the so-called “creative industries”—as opposed to the “tools” that constitute the world of conventional economics.

Since cultural goods are produced, distributed and used in networks (Potts et al., 2008), the preferential attachment rule applies (Barabási & Albert, 1999): cultural networks generate at any given time a few “popular” nodes¹¹ with a high number of links (hubs), while many nodes with

⁹ The phenomenon of proportional firm size growth is also known as “Gibrat’ law”, which spawned empirical studies after its original publication in 1931. See also Gabaix et al. (2003) on fluctuations in financial markets.

¹⁰ Gastronomy is an interesting exception, woefully underresearched.

¹¹ There is no need to assume a similarly skewed distribution of talent in a population. Salganik et al. (2006) tested the proposition successfully in an artificial cultural goods market. Easley and Kleinberg (2010) suggest “popularity” as a term fitting for any kind of social attachment.

few links make up the bulk of the network. In this ever-evolving structure, patterns of temporary price peaks and long price valleys are continuously played out.¹²

Over the past two decades, revenue distributions that follow a power-law function in their upper tail have been identified in a wide range of cultural goods markets, for immaterial as well as material products. Since digitization has reached and transformed cultural goods markets, some scholarly attention has been addressed to the low end.

The present synoptic study reviews scholarly works focused on segments of the distribution function for evidence of power law structure, particularly at the low end of the distribution. Section 2 presents evidence from markets that provide access to immaterial goods: music, books, films and visual content. Section 3 reports on markets for events, and for material cultural goods: paintings, antiques and collectibles. Section 4 concludes with the major finding of a dynamic upward and downward value traffic, organized in sequences of interlocking markets.

2 VALUE DISTRIBUTION IN MARKETS FOR IMMATERIAL CULTURAL GOODS

Immaterial cultural goods consist only of messages. The messages are auditory, visual or, via some common vocabulary, literary.¹³ They are complemented by material forms, like musical instruments and printed books. The products sold in a market are copies of some original recorded message, the “master copy.” In these markets, the number of copies sold, multiplied by the price per copy, indicates the economic value of a single album, novel or film.

2.1 *Markets for Copies of Musical Recordings*

In 1981, Rosen investigated markets where the distribution of rewards follows a power-law function, epitomized by “superstars.” The examples were markets for the services of comedians, for recordings of classical musicians and for textbooks. His explanation attributes the

¹²The term “preferential” invites ambiguities in an economics context. Here, it indicates a utility-maximizing choice rather than a preference, be it innate or acquired.

¹³An exception are culinary products and perfumes. See Linford (2019).

“multiplicatory effect on reward” to “superior talent and ability” (Rosen, 1981, p. 852). Four years later, Moshe Adler shifted the explanation to consumers’ knowledge. His example is the appreciation of music, where listening and discussing it with other persons is “the key to the phenomenon of stars” (Adler, 1985, p. 208). The distribution is efficient, because “efficiency calls for very few artists with public recognition” (Adler, 1985, p. 211). Chung and Cox (1994) refer to Adler when they show that the distribution of gold records among performers between 1958 and 1989 follows a “Yule-Simon” function,¹⁴ due to the “probabilistic” behavior of consumers, irrespective of the performers’ talent.

The focus on the skewed distribution at the high end left little attention for the low end of these markets. Circumstances changed when digital technology and a rapidly spreading digital communication network made it possible to produce music more cheaply, to search for new music more effectively and to distribute copies via the Internet at zero marginal cost. Now, the immaterial property of music began to determine market structure.

When Anderson (2006) published his hypothesis on the long tail, his empirical argument was based on data from *Rhapsody*, an early music streaming platform that had registered the number of downloads per title during December 2005, for a million titles. Anderson notes the skewed distribution at the high end, which he calls the “head” of the distribution, but he emphasizes the endlessly long extension on the low end, which he called its “tail.”

Three arguments support his claim that the economic value generated has shifted towards the low end in digital music and video markets: (i) the expansion of inventory, (ii) the lowered cost of digital production, search and distribution, and (iii) the increased accessibility of niche products through algorithmic filters. His claim was countered by Anita Elberse with results that showed a stronger increase on the high end, presumably because digital communication enforces the multiplier network effect.¹⁵ The controversy continued over the following years, Napoli (2016) counted more than 600 studies of the long-tail phenomenon. Based on

¹⁴ The function, which Herbert Simon identified and named after its first discoverer, is the equivalent of a power law function, expressed as a probability distribution of events along a rank-size-plot.

¹⁵ See Elberse (2008). Her results were based on data from video sales (Elberse & Oberholzer-Gee, 2007).

evidence from music and video markets, he concludes that the advantage of the one-stop megastore with its long tail of products is outweighed by the effect of digitally boosted attachment to the megahits, leading to “an increasing gap as the long tail both retracts and fragments” (Napoli, 2016, p. 352).

Haampland tested the “cumulative advantage” theory of success with data from *Billboard 100*. He plots the share of weekly total market value against the chart positions in randomly selected weeks, and tests for path dependencies over a series of weeks. His results confirm the “Yule process of proportional growth,” and he finds the same pattern on a weekly basis. “This might also provide a notion of the fractal nature of the power phenomenon” (Haampland, 2017, pp. 370–371). Coelho and Mendes presented an overview of studies on the pop-rock music market. They provide evidence for persistence of the superstar effect. They see it even strengthened by the increased share of the revenue stream coming from concert tickets, and by the recommendation algorithms of streaming platforms. The tail end of this market is remarkably long: 94% of the tracks purchased on iTunes in 2013 were downloaded less than a hundred times (Coelho and Mendes, 2019).

Gustar (2020) computed thirty power law distributions in classical and in pop music sub-markets, from “BBC Proms composers” to “UK Million-selling singles” and ordered them along their estimated power-law exponents. He claims that the distribution of success is generated by a combination of network communication, promotion, appreciation and listening habits. The process can be influenced by “inherent quality,” but only to the extent that such items stay, if they are successful, somewhat longer at the top.¹⁶ Prinz draws his explanation for power-law distributions in music from game theory. His data come from an annual voting procedure that selects the *Dutch Top 2000* songs. The distribution of song success in this non-commercial ranking “seems to follow a power law tail, combined with an exponential tempering” (Prinz, 2017, p. 392).¹⁷ In terms of market organization, superstars—which can even rise to the status of incontestability, as the Dutch voting poll shows—are focal points in large coordination games: “they coordinate the social preferences of people” (ibid., p. 397).

¹⁶ Gustar makes no reference to network theory and preferential attachment. Rather, he interprets power-law distributions as solutions to a maximum entropy problem.

¹⁷ Prinz’s “tail” is the high end of the market.

2.2 *Markets for Books and News*

Studies on Pareto distributions in markets for books, fiction and non-fiction, process much larger data sets. Brynjolfsson, Hu and Smith used data on Amazon sale ranks of books for several weeks and came to the conclusion “that the Long Tail has grown longer over time, with niche books accounting for a larger share of total sales. Our analyses suggest that by 2008, niche books account for 36.7% of Amazon’s sales and the consumer surplus generated by niche books has increased at least five-fold from 2000 to 2008” (Brynjolfsson et al., 2010, n.p.). Benghozi and Benhamou (2010) computed their Pareto distribution of sales in the French book market with survey data for 20 weeks in 2005. They detect in their time series oscillations of the Pareto curve, with the high tail getting stronger in the weeks before Christmas. Overall, they credit digitization with a strengthening of both tails. Electronic media boost popularity on one end, and they enable trade in small product numbers at the other end, due to low-cost distribution in specific market niches. Peltier, Benhamou and Touré (2016) used similar data, encompassing 170,000 positions between 2004 and 2010.¹⁸ The French book market is dominated by a duopoly. Around these two companies, they identify a first fringe of medium-sized and a second fringe of small publishers. They distinguish online and offline distribution, and they show “that the market share lost by dominant firms is captured by small publishers online and by medium-sized publishers in conventional stores” (ibid., p. 394). Liebowitz and Zentner (2024) use Nielsen sales data on more than 250,000 U.S. book editions between 2004 and 2016 to demonstrate that the use of rankings to approximate sales data is inaccurate for the very long tail of the market where sales of less than 10 copies are common, which is misrepresented by equidistant rank numbers.

Huang and Wang (2014) studied the digital online news market. They sent questionnaires to 720 news sites: “The results of our research reveal that online news institutions have responded to the changing market trend of segmentation and niches by deploying a long tail economy in terms of content, service, and participation variety (...) online news institutions are still encountering the difficulty of turning web traffic into real profit and revenue, ...” (Huang & Wang, 2014, p. 173). The market situation is complicated by the

¹⁸ See also Peltier and Moreau (2012) on long tail effects of the Internet.

fact that news formats, be they in print or in pixels, are attractive surfaces for commercial messages. Revenue is therefore frequently a combination of advertising income and income from sales of copies or subscriptions.

2.3 *Markets for Movies and Videos*

The performance for which viewers of movies and videos pay consists in a sequence of immaterial moving images and sounds. Nevertheless, movies are the outcomes of a heavily material process. Arthur De Vany has spent a lifetime of research on the probability distribution of success and loss in the movie industry. In a handbook article, he synthesized his findings. To him, movies are “prospects, probability distributions as ephemeral as the images on the screen. It has to be that way because movies are creative products—they are pure information...” (De Vany, 2016, p. 661). Distributions with heavy Paretian tails fit the movie industry “like a glove.” They “capture the winner-take-all nature of the movie business as well as the dominant influence of extreme events” (ibid., p. 538). Since he has data on the budgets of unsuccessful movies, the graph of the distribution function extends beyond zero profit to loss and shows a symmetrical tail of extreme events on the negative side.

Among De Vany’s “laws of the box office,” three stand out: (i) extreme events dominate: “As time expands, the size of changes grows. Thus, the largest event so far observed will, eventually, be exceeded. In fact, the variance will grow as the sample grows” (ibid., p. 646); (ii) non-linearity of momentum: “At about the fourth or fifth week of the run ... hit movies rapidly diverge from the bombs and the mapping bifurcates...” (ibid., p. 643); (iii) Biased decisions under uncertainty: “An executive must always make some assessment of the odds in choosing movies. This is harder to do when the movie or the actors are unknown entities” (ibid., p. 660).

Shapiro (2023) interprets results from visual as well as musical media markets, based on data from movie box office sales, Netflix series rankings and Spotify streaming. In such networked environments he observes that lowered search and distribution cost have fattened the high ends of media markets as well as their low ends: “The good news is that hits still matter and likely always will. The bad news is just about everything else: the lucrative middle is being hollowed out; risk is climbing; the tail is become more competitive for hits; bargaining

power is shifting to the top talent; content producers are increasingly at the mercy of curators’ algorithms; and paid media is being devalued” (ibid., n.p.).

3 VALUE DISTRIBUTION IN MARKETS FOR EVENTS, AND FOR MATERIAL CULTURAL GOODS

Markets for immaterial cultural goods are a rather young phenomenon in the history of the sector. In contrast, markets for material cultural goods are centuries old. Physical objects, made out of substances that deteriorate over time, are bound to a physical location, and they convey messages about their own, singular historical “period.” They can take the form of buildings, sculptures and *paintings*, of small editions of hand-crafted *antiques*, usually intended for domestic representation, and of objects, even industrial, that are sufficiently similar, scarce and meaningful to generate a market for that kind of *collectible*. *Events* take place in both dimensions: their subjective experiences are fleeting as immaterial cultural goods, yet their production is highly material, and therefore costly.

Pricing in markets for material cultural goods is strongly determined by their material dimensions. Therefore, it is questionable whether the power law distribution and the dynamics of frequent changes in popularity observed in markets without these constraints still hold. My presentation of available evidence concentrates on the four varieties highlighted above.

3.1 *Events: Festivals, Concerts, Tourism*

Events are a major means of selling experiences that carry value for those who participate in a particular culture game. Consumers buy access to an event that “is consumed jointly and in public in the same place at the same time” (De Serpa & Faith, 1996, p. 77). Events need a physical venue for unique, unrepeatable performances. Even if their format is copied, every copy is costly as well. There is great variety amongst markets for cultural events: traditional performances in concert halls, clusters of stages with concerts in the format of an annual festival at the same location, visits to sites of high cultural prestige, organized in commercial or private tours, and sittings at restaurants that provide Michelin-rated culinary experiences illustrate the disparity. Studies on revenue distribution in any of the submarkets are rare.

Connolly and Krueger (2016) did research on the rock concert business, following De Vany's methodology. They estimate that revenue is distributed along a power law function, with an exponent α of 0.45 for artists' and 0.55 for promoters' revenues. Two studies use data from tourism markets. Ulubaşoğlu and Hazari (2004) charted international tourist arrivals in 89 countries in a volume-rank plot and find that the data follow a power law function, with a very long low end.¹⁹ Provenzano (2014) estimated power law distributions of lodging capacities—as a proxy for tourism volume—in Italy and in Germany.²⁰ He finds “that the size distribution of tourism industry is heavy-tailed and consistent with a power-law behavior in its upper tail” (ibid., p. 1055).

3.2 *Paintings*

Artworks use three-dimensional (sculpture) or two-dimensional (painting, drawing, photograph) visual forms. Their markets are midway between immaterial and material conditions because they are created for immaterial cultural experiences, yet they need a material medium to inscribe their messages. Paintings—framed canvases treated conventionally with oil or acrylic paint—have become the standard format of European artworks. Their sales volumes and prices are best documented in auctions. In consequence, the data for empirical studies are mostly drawn from auction sales. However, the restriction to sales in the secondary market cuts off information about sales of all the artworks transacted outside of auction sale-rooms, which leaves not only the low end, but also the entire dealer market unobserved.²¹ The scholarly interest in auction prices for paintings has generated a few studies that focus on revenue distributions, while the markets for other auction departments have not yet been explored.²² Over

¹⁹ Based on the average numbers from 1986 to 1990, France is at first rank, hundred times more popular than # 52, Pakistan.

²⁰ The data are from 2004 to 2009, the value of exponent α is around 2.5. It is not clear whether the data also include business-related travel.

²¹ Hutter et al. (2007) compare auction and dealer prices, find the same distribution pattern and explain the higher prices in gallery sales with the complementary membership in an exclusive collectors' club.

²² Ashenfelter and Graddy (2016, p. 936) report 1996 average sale rates for 37 auction departments at Christie's, from Impressionist (£ 122.000) via furniture (£ 11.000, at 9th rank) to wine (£ 690). Revenue distributions in all these submarkets are highly skewed. In an

a series of publications, Etro and Stepanova have assembled unique data sets for sales of paintings during four historical periods with extraordinary artistic activity. They use their data sets to test for power law distributions (Etro & Stepanova, 2018). They succeed in all four periods, reporting exponent values between 2.07 (Renaissance Art, 1255–1510, 56 artists) and 3.77 (Dutch & Flemish Golden Age, 1597–1700, 277 artists). An added test with data from recent auctions of works by 575 artists yields an α -value of 3.3. These slopes, however, are only valid for the skewed upper tails, most works in the sample were sold at similar low prices. The authors seem to take it for granted that the reason for unequal success is a correspondingly unequal distribution of talent, defined as the ability to innovate successfully. They demonstrate convincingly that large teacher-student networks were formed especially during the Dutch period and attribute the skewed sizes of successful workshops to preferential attachment of new students. They do not transfer this argument to the buyers of paintings by popular artists.

Fry (2020) worked with a data set for the 100 best-selling indigenous Australian artists, thus isolating one particular submarket among the many that reach the level of auction attention. He takes a power law distribution of prices within that market for granted, his interest is with the accuracy of pre-sale estimates. He finds that the overall price distribution “is overestimated at the top of the overall distribution, and underestimated at the bottom of the distribution . . . In the low-price segment, where buyer preferences and (private) valuations may be important, the experts underestimate the hammer price” (ibid., p. 184). A paper with Erica Coslor (Coslor & Fry, 2024) on the price effects of accusations against an artist finds evidence for “stigma,” which leads to losses in realized hammer prices. The authors suggest that similar reputation losses may be caused by rumors about the authenticity of works, or about a change in interest by key collectors.

Aloys Prinz investigated the reputation value of intermediaries in the market for contemporary art. Based on the annual “Power 100”-ranking of *ArtReview*, he finds “that the ranking of power members over time is [. . .] characterized by an extreme value distribution function” (Prinz, 2022, p. 19).²³ He distinguishes two market stages: an “upstream market”

unpublished dissertation, Simpson (2020) compared power law distributions for celebrities in visual art, sports and music. He finds the steepest tail in the market for artworks.

²³ The list includes mostly collectors, gallerists and directors of renowned museums.

where experts determine artistic value through judgments of quality. They “reduce the quality uncertainty for art collectors and art buyers in the downstream market by disseminating relevant information about art based on their art knowledge” (ibid., p. 26). These judgements influence the “downstream market ... [where] works are sold and bought against payment.” A second study investigates the reputation distribution among 2000 German art galleries. Prinz takes the sum of “glory points”²⁴ attributed to the top 100 artists by a professional scoring algorithm, adds up the points of all those artists that are represented by a given gallery, and uses the resulting figure as an indicator of the gallery’s capacity to succeed. The result is a power law distribution of gallery “power” with an exponent α around 2. Prinz and his co-authors attribute the success of the “few leading galleries” at the high end of the tail to their capacity for innovation, “supported by information cascades in such a way that their success advantage cannot be eroded by competition” (Prinz et al., 2015, p. 170). This incontestability resonates with the findings of his study on the most valued pop songs in the Netherlands (Prinz, 2017).

All the studies cited concentrate on the high tail of the revenue distribution in markets for artistic paintings of a particular category. There is some mention of a “mid-section” and an “upstream market,” but the low end is outside of the scope of interest.²⁵ However, studies on artistic labor markets show that the tail is much longer than in other markets. There is “excess supply,” as U.S. artists are willing to earn roughly a third of their income through non-art occupations (Alper & Wassall, 2016, p. 851).²⁶ The production process is impossible to industrialize, even if successful artists are able to employ a team of assistants to scale their output. Moreover, art project rooms and artist-run galleries are means to pool production, display, promotion and transaction in a common organizational unit. It is in this kind of milieu, usually strongly concentrated in

²⁴ The term “glory points” was coined by Willi Bongard, initiator of *Kunstkompass*, a success index that continues to be computed. Valuation points from exhibitions, reviews and other forms of recognition are juxtaposed to the artists’ estimated gallery prices.

²⁵ Hodgson et al., (2026) (in this volume) separate their sample of Australian indigenous paintings in three hierarchical value sections. They are not interested in revenue distribution, but they provide rare evidence of movements up and down the value slide. They suggest that “artists whose status is declining tend to “fall” through the hierarchy of auction houses as demand for their works declines.”

²⁶ See also the section on excess supply in Menger (2016).

a few metropolitan centers per continent, where aspiring artists gain their first opportunities to present their work to a trained audience that is willing to pay for it. At the low end, residency grants and invitations to funded exhibitions provide opportunities for income, in cash and in kind. The extent of this production line and its reputation for creativity have led to claims of a “schism” between conventional gallery art and experimental, yet professionally curated “Biennials” art.²⁷

3.3 *Useful Cultural Goods: Antiques and Collectibles*

Immaterial cultural goods are attempted messages, with the faint prospect of becoming valuable as part of a community’s or society’s archive of tunes, stories and images. Instead, most material cultural goods begin their historical journey as useful commodities. Even paintings were considered part of private decoration or of religious representation until the fifteenth century. Most other man-made objects are valued as efficient solutions to a material problem: maximal effect at minimal cost. However, such objects also find communicative and thus cultural purposes: they can display the owner’s taste, as is the case with furniture or glassware, or they stimulate games of collecting objects with narrowly specified forms, like shells, stamps, medals or vintage cars. Such goods are “tools” as well as “toys.”

The conditions of production and consumption distort the power law curve of material cultural goods to a degree that makes it unrecognizable. The goods are not sold as copies, but as singular physical objects. Revenue is gained from a few singular items that have become very valuable. They may be manufactured in series of identical pieces, but the extent of such series is limited if the pieces are handmade. Over time, the number of specimens diminishes, and differing degrees of physical deterioration affect each item’s particular market value. The high value of excellent specimens makes them attractive as stores of financial value. This secondary use as assets increases demand for objects at the high end of the distribution.

The literature on revenue distribution in markets for material cultural goods is sparse. I focus on the submarket for antique furniture, where some empirical results, quantitative and qualitative, are available. In this volume, Radermecker investigates antiques: decorative art

²⁷ See Baden (2018).

objects over 100 years old and produced at the intersection of craftsmanship and (semi-) industrial manufacture.²⁸ The study is motivated by the observation of a generational change in lifestyle, and an epochal drop in prices for antiques since the establishment of online marketplaces. Lowered search cost for sellers as well as for buyers have led to a large increase in the quantity of pieces offered, with a subsequent drop in the price level. However, uncertainty about quality and fakes limits the scope of such marketplaces to the low end, where platforms are the digital equivalent of flea markets. Radermecker uses data from Drouot.com (Paris), which excludes pieces that are sold at top-tier auctions. She finds that high-end antiques are more vulnerable to changing market trends, tastes, and lifestyles (*ibid.*).

Insights into the fine calibrations of this “ecosystem” can be gained from posts by the antique furniture dealer Ed Welch, published in the *Journal of Antiques and Collectibles* between 2002 and 2007. After several decades of professional experience, Welch has come to the conclusion that there are ten levels in markets for antiques. He divides them into three segments. At levels 10 and 9, items at the skewed high end of the distribution are sold. The volume of trade is shared between high-end auction houses and dealers that are specialized at these levels. Levels 8 to 3 constitute the mid-tier. At 8 and 7, reputation and specialization guarantee quality; at 6 to 4, less knowledge is required, the field is full of semi-professionals; dealers at level 3 need knowledge for picking unrecognized valuable pieces out of undocumented estates, and they need knowledge about price differentials at market locations. At levels 2 and 1, dealers sell at flea markets, and through websites targeted to specific collectibles. In 2007 prices, deals at level 1 are below \$50, at level 4 below \$800 and at level 8 below \$8,000. At the high end, limits are there to be broken.²⁹ According to Welch’s observation, the attempt to sell an item below or above one’s level either fails or results in

²⁸ Radermecker cites studies on markets for fine violins, British postage stamps, silverware, glassware, diamonds and Premier Crus wines. These studies focus on average rates of return on investment at the high end, not on the spread of prices within each submarket.

²⁹ At a recent auction for pop culture collectibles, the ruby shoes from *The Wizard of Oz* were sold for \$ 32.5 million, “becoming the most valuable movie memorabilia ever sold at auction. That sale alone accounted for the bulk of the auction’s \$ 38.6 million total.” <https://journalofantiques.com/digital-publications/january-2025-1925-2025/> p. 60. Accessed on March 25, 2025.

major price reduction.³⁰ At the high end, the skill lies in selling; dealers build a network of suppliers and clients, they spend time and resources on keeping in touch, and they expose their business only for a few days at prestigious fairs. At the low end, the skill lies in buying, finding items that are favored and collected by largely anonymous buyers.

The three segments apply to all markets for material cultural goods. The kind of stores, the range of journals, the type of auction house—they all differ relative to the range of potential buyers. The phenomenon is observed in markets for period furniture as well as those for postage stamps.³¹ The three segments add up to a distribution of revenues that follows—adjusted to local conditions—a power law function. Not only is the pattern observable in each of the hundreds of submarkets operative in the U.S., it appears also within each market at each level, because prices for antiques are extremely sensitive to the physical condition of a specific item. The price differential from “best” to “good” is generally more than half, and items that have defects are sold at discount prices. Finally, the “eco-system”—now identified with the mid-tier of all active antiques markets—is stabilized by institutions and information channels. Dealers have firm business connections with partners at higher and lower levels, they all follow the same code of conduct. For collectors of vintage and antique objects, the major fairs are venues for interaction, often organized by associations that provide information services for their audience.

Welch refers to the low end of the antiques markets in three ways: he is a dealer who sells items year-round through websites that cater only to their specific clientele, he mentions *eBay* as “the bargain basement” of the markets, and draws attention to “pickers” who acquire wholesale lots, usually from household clearances, recognize valuable items and sell them at flea markets or on platforms like *eBay*.³² However, not all of

³⁰ “The knowledge required is different, operating expenses are different and selling and buying methods are different.” See <https://journalofantiques.com/?s=welch+pickers>. Accessed on March 25, 2025.

³¹ Quote from the section of stamp collecting in the January 2025 edition of the *Journal for Antiques and Collectibles*: “While the value of the hobby is mostly in the fun of completing stamp books and meeting fellow hobbyists, some “holy grail” stamps keep all collectors on their toes. In the world of U.S. stamp collecting, the Blue Boy is akin to the *Mona Lisa*.” (p. 36).

³² Welch also suggest a distinction between rule-based and face-to-face items. The first are easy to qualify precisely according to their standardized features, while the latter are less regular and need explanation—which, again, occurs on all three tiers.

those who buy at flea market prices intend to simply keep the items in their collection. A practice specific to the music market is crate-digging, “that age-old practice of rummaging through record shop discount bins in the hopes of discovering snippets of sonic gold for sampling.”³³ In a much more general approach, Thompson hypothesized that commodities go through a transient stage during which their commercial value sinks until it reaches the stage of rubbish, “which is a cultural category of a special type,” distinct from “residual” (Thompson 1979, p. 101). Some of the commodities are transformed, due to their cultural connotations, and reach a state of “durable” value.³⁴

The evidence from markets for material cultural goods suggests a dynamic relationship between the three market tiers, sequences of valorization and de-valorization, organized as traffic upward and downward the revenue scale.³⁵ Dealers move the traffic. They are experts, historians, restorers, networkers and communicators, with the mixture of skills needed to bring a fraction of items from a lower to a higher price bracket, or skills that sort items with remaining value from those that slide into negative value—rubbish.³⁶

4 CONCLUSION: TRAFFIC, UPWARD AND DOWNWARD THE POWER LAW SLIDE

Cultural goods are goods with low to high “symbolic functionality.” The available studies confirm that revenue in markets of such goods is roughly distributed along a power law function. Moreover, they suggest that some of the items in each submarket move through

³³ From <https://www.perfectcircuit.com/signal/vinyl-sampling-workflows?srsId=AfmBOod75-AaBTzLUwdtuRJUp8GAwqX06pBh6t6tcIJjpsIkXu1Bax5>. Accessed March 25, 2025.

³⁴ An equivalent category is proposed by Boltanski and Esquerre (2017). They distinguish between a “standard form”, with declining price, and a “collecting form” of commodities, with increasing price. See also Kopytoff (1986).

³⁵ I use the spatial terms upward/downward to avoid confusion with the temporal upstream/downstream distinction.

³⁶ Beyond the scope of this review are markets for “judgment devices”, e.g. guidebooks, rankings and assessments, and other forms of “knowledge” that promise to reduce uncertainty for buyers. An encompassing study of this field, based on a theory of markets for non-homogeneous goods, is Karpik (2010).

a sequence of markets along the power law slide, as they gain or lose in “brand strength.”³⁷

The Low End is the beginning and the end of such value careers. It is the beginning for unknown young painters, or DJs combining music samples found at a flea market, as gallerists or music producers select those among new works that show potential for success. Most of the works do not gain reputation and remain at the low end, their creators support themselves through other financial sources. The works of artists selected by dealers and producers gain brand strength as they are traded on increasing price levels. Works that reach level 10 tend to remain there, unless they are taken off the market by public collections. Success and failure of works in contemporary music genres takes place more quickly and runs through fewer market levels, but brand strength—observed as “popularity”—is again heavily skewed. The major share of revenue goes to the small number of companies that are able to promote successful artists consistently.³⁸ The downward journey towards the “low end” sets in as brand strength weakens. Physical quality deteriorates, tastes change, and reputations are forgotten. At the low end of markets for goods with direct and symbolic functionality, like furniture or porcelain, dealers gain profit by identifying objects with sufficient brand value to be collectible, and marketing them through a variety of distribution channels.

Research on sequences of market levels in submarkets for cultural goods is hampered on practical as well as on theoretical grounds. It is easier to measure the distribution of success in markets for immaterial cultural goods where it can be proxied by the number of copies sold. Data on sales are often proprietary, and differ in quality depending on their sources. Readily available auction data bias research toward the high end of their markets. Moreover, the revenue differences along the sequence of markets are obscured if the underlying theory ignores the sequence and assumes homogeneous goods, single prices and constant expectations. Median values are meaningless in exponential distributions, and high average revenue figures in winner-take-most markets overestimate the chances for success of market entrants. Better information on the low end of these markets might be gained by applying qualitative methods, particularly structured interviews with primary market participants.

³⁷ See the introduction by Moureau and Radermecker on the notions of “symbolic functionality” and “brand strength”.

³⁸ For examples, see Elberse (2013).

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