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The Curating City:

A Functional Account of the Agglomeration of Creative Industries

A dissertation submitted in partial satisfaction

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in Urban Planning

by

Patrick James Adler

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ABSTRACT OF THE DISSERTATION

The Curating City:
A Functional Account of the Agglomeration of Creative Industries
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Professor Michael Storper, Chair

This study discusses the importance of curation in the contemporary economy, particularly in cities. Curators facilitate choice among symbolically-differentiated products either by directly choosing products on behalf of clients or otherwise lowering choice costs. Demand for curation is accelerating in sectors where symbolic differentiation is a source of value, including cultural products, finance, and research. This is both because these sectors command a greater share of economic activity and because digital technologies have dramatically expanded the available supply of symbolic products. Here, the focus is on how professional curation is organized within symbolic/creative industries and across space. Curation is said to resemble a relay wherein the decisions/outputs of some curators are incorporated as inputs into curation decisions downstream. As product sets are passed through this system, the number of products under consideration is lowered along with the level of uncertainty surrounding each product's value. Because curation systems require continuous information exchange, they should realize benefits from localization. Five types of agglomeration economies are identified: the superiority of face-to-face communication, the ability to form information cascades, coordination of 'consideration sets', the ability to determine what the market values, and provenance effects. Two empirical analyses support these propositions. A small study of the US labor force finds that curating occupational categories agglomerate at higher levels. A detailed analysis of major music festival programming between 2017 and 2019 shows that previously curated acts are more likely to be selected to festivals, that festival programmers are more likely to select acts from their local environment, and that acts from prominent music scenes are more likely to be selected to major festivals, controlling for

quality. LA, New York, Nashville, and London are said to export 37% of music festival acts to major festivals, at least in part, because musicians in these places have better access to curation systems. These results as well as the theory of curation presented here suggest that the ability of 'creative cities' to unearth or determine product value may currently be understated.

The dissertation of Patrick Adler is approved.

Christopher Tilly

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Gabriel Rossman

Michael Storper, Committee Chair

University of California, Los Angeles
2021

To Karen and Richard Adler, who introduced me to so many cities.

The Curating City: A Functional Account of the Agglomeration of Creative Industries

List of Figures

List of Tables

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Chapter 1: The Curating City

I 'Never Going Back Again'

> I started doing informational interviews in Madison and going to advertising agencies and radio stations looking for openings. I met a guy who had worked at Leo Burnett and he told me, "You should work at Leo Burnett in the creative division in Chicago; I have a friend there and I'll call him," and it seemed like a sure thing, though I told him I'd never taken an advertising class and knew nothing about it. But I put together a book of ideas and went to Leo Burnett in Chicago in late summer of 1982. I'd been successful at things in the past, but the guy closed my book halfway through and just said, "This is awful." I asked him, "Is there any potential here at all?" and he said, "No." I was on the sidewalk ten minutes later. I had no prospects at all and decided I should go to Los Angeles or New York. I decided to try L.A., and I went and stayed with a friend in Glendale. [...]
>
> I interviewed with Ray Kurtzman, and he said, "Here are the reasons you don't want this job." I was about to say, "I'm desperate, I need a job and I have no possibility of a job," when Ron Meyer came in. I had never seen someone like this before in my life. In Milwaukee, there were no suntans and cool glasses. Ron looked at me and said, "Look, here's what's going to happen. You are going to be dying to go out with a girl. You've been after her and trying to convince her to go out with you, and she's going to finally agree to go out with you. Then ten minutes before you leave for the date, I'm going to call you and tell you you've got to pick up a script for me or do something else, and you're going to have to call her and cancel the date. That's this job." I said, "I'll do anything you want me to do for this job!" We finished the interview and I walked down the hallway and then Ray's assistant Gail Katz said, "Richard, come back!" So I went back into the office and they said, "You can start on Monday." When I was walking out, I asked the receptionist, "Is this a good place? Who are the clients?" She said, "Robert Redford." And I thought, This place must be great!
>
> Richard Lovett, President– CAA (Miler, 2017: 185–186)

Richard Lovett is probably happy with his decision to move to Los Angeles. The University of Wisconsin-bred überagent and president of one of the biggest talent agencies in the world might have done very well for himself in Madison or Chicago but we would not know his name if he had not thrived in Hollywood. L.A. is where agents like Lovett or his predecessor Michael Ovitz become household names.

Examples abound of 'Hollywood hopefuls' who came to L.A. and succeeded. We cannot usually know whether such people would have made it otherwise because we mostly only observe those who make it. In Lovett's case, we cannot see what he would have done if he had stayed in Madison. Perhaps he would have founded a CAA rival on the banks of Lake Michigan? On this score, the example of Fleetwood Mac is even more telling. Fleetwood Mac formed in London in the late 60s and was, from that perch, a globally recognizable group under the leadership of its drummer Mick Fleetwood. They were clearly talented enough to succeed, however they were not *bona fide* superstars until they moved to L.A., linked up with guitarist Lindsey Buckingham and singer Stevie Nicks and recorded *Rumours*. They were primarily musicians and not managers or human resource professionals. Still, it is hard to fashion a theory of Fleetwood Mac as a mega group that does not emphasize their decisions to come to L.A. and hire two

Californians to front the band. They succeeded in this capital of music — at least in part — because they chose the right collaborators. Those collaborators were in Los Angeles, the city that was said to have "starmaking machinery" (Stokes, 1977), and to attract the best musicians.

The goal of this study is to account for why creative cities seem to work for the likes of Lovett and Fleetwood Mac— specifically why they see to be places where symbolic choices, be they about actors and musicians, or scripts are made. In this thesis we will see that one of the key things that Los Angeles does for Lovett and Fleetwood Mac is to put them in an environment where their products are more likely to be selected by curators (agents, music labels, executives), that is professional evaluators of creative talent and products. Selection by these professional symbolic choosers, leads to a degree of unearned attention, exposure, and legitimacy in the global marketplace. As great as their talent was, Lovett and Fleetwood Mac benefited from localized curation processes that gave them the edge over so many aspiring agents and musicians, the world over.

II Curation as a Core Function of Creative Cities

This study is set within a technical literature on urban agglomeration economies and a more vernacular one on creative cities. The 'creative city' has been an object of enthusiasm among many scholars and practitioners and the subject of widely-read monographs (Florida, 2012, Landry, 2008; Lloyd, 2005), consulting reports, and white papers (See Silver et al., 2011 for a policy review). Its subscribers emphasize that advanced economies are transitioning toward knowledge-based work as a source of economic value and that certain urban areas host outsized shares of this activity. The creative city is understood as a type of place whose workers have high degrees of human capital or whose economies are devoted to knowledge-intensive output. Creative cities are quite different in terms of what they produce. The San Francisco Bay has one of the highest national shares of so-called "Creative Workers" and so does Madison, Wisconsin (Florida, 2012) but in the former creativity is mostly channeled into the world of bytes and in the latter it's into government and higher education. Other observers have identified creative districts in Manhattan (Currid, 2007), Nashville (Lloyd, 2005), London (Mitchell, 2019), Stockholm, and Kingston (Power and

Hallenkreutz,2002). Some critics consider the expansive definition of creative cities to be unhelpful (Markusen et al., 2008; Mcgranahan and Wojan, 2007) because it aggregates workers with dramatically different skill profiles, values, and politics under the same heading. Florida maintains that knowledge-based workers should be characterized as an economic class unto themselves, owing to their relationship with modern production (Florida, 2014). There needn't be any contradiction between these positions if we allow that the 'creative city' is one *phylum* of labor market in the contemporary economy, but that there is simultaneously great variation among creative cities in terms of what they do and who they involve.

Nonetheless, there are gaps in the literature related to the functions of agglomeration for creative city actors. In the research reported in this thesis, I attempt to fill in one of these gaps. Specifically, one of the key economic functions of certain cities is that they have an organized sector that itself organizes markets in which variety proliferates and is difficult to evaluate for the consumer because the product has high subjective or symbolic content. This thesis will demonstrate that there has been a great deal of growth in the variety of symbolically-rich products and services in recent decades, and that concomitant with that growth is the expansion of the role of curators and curating business sectors, who help to channel demand into a smaller number of successful products. To put it most simply, curation is now an observable function of the economies of certain cities, and in some cities, it is an economically-important sector in and of itself.

The present study represents a new way into a new standard set of topics related to creative cities. A decade or so ago, there was a flurry of scholarship on the topic of how these places form — especially on whether the 'chicken' of jobs or the 'egg' of creative workers initiates creative agglomerations (Storper and Scott, 2009; Florida et al, 2008; Nathan. 2007). While this was an important topic from the standpoint of growth theory, it might not have very much direct relevance to current urban planning practice because, for the most part, creative agglomerations are longstanding structures that have already locked in their agglomeration benefits on the labor supply and demand sides. New York, Los Angeles, Silicon Valley, Madison, and Nashville have all been creative for longer than there has been a discussion of creative cities. The "chicken or egg" problem may seem a bit esoteric for planners working in or on behalf of already-

creative cities. For them, the question of "how important is my city for creative work?" is more pressing than "how did my city become creative?".

Today, the essential functions of creative cities are top of mind. As I write this introduction, focus is increasingly drawn to the topic of the function of the city in a post-pandemic world (Florida et al., 2020). The Covid-19 pandemic has forced urban residents into mostly hermetic existences in which the normal joys and opportunities of urban life are closed off. In this context, new tele-connected routines are being developed, and the question of whether urban living is 'worth it' is front of mind for workers — especially those who can carry out the formal requirements of their work on a virtual basis. When cities reopen, they will not be able to rely on the inertia of existing routines. They will have to be (and appear to be) useful environments for creative work if they want to maintain pre-pandemic activity levels. This thesis studies an aspect of creative agglomeration that has hitherto been neglected, a function of creative cities related to the valuation of products.

IV Outline of the Argument

This study centers on curation as a professionally organized division within the overall economy-wide division of labor. Curation is an organized activity in the contemporary economy. It is not necessarily artistic in character or performed by a single recognizable curator (Balzer, 2014; O'Neil, 2012). The auteurish curator is only one of several types of actors among symbolic creators, intermediaries and organizations who perform or facilitate symbolic choice. In-depth study of such canonical curation is better left to sociologists, anthropologists, scholars of art, and those with more refined tastes. Here, the focus is on the role that curation plays in modern industrial capitalism and the way that it is organized in time and place.

Curation is growing during the 'Third Industrial Revolution.'

Variety grows with economic development, for a variety of reasons that will be explained in Chapter 2. With expanded variety comes higher degrees of product choice and higher demands on the buyers and organizations that perform choice. Expanded choice does not always mean more difficult choices. Search engines and selection algorithms connect consumers to products with highly codifiable objective features,

allowing for consumers to winnow unfathomably large arrays of products into manageable choice sets. The proliferation of goods and services with symbolic or subjective characteristics is not so easily managed. Because symbolic preferences are taste-oriented, fluid, and context-dependent, they are not easily codified. The marginal symbolic product or characteristic will tend to make consumption more difficult, less successful or both. The so-called "paradox of choice" (Schwartz, 2004) is greater with symbolically-differentiated products.

The proliferation of symbolic variety generates a problem of market formation due to surplus variety and information that may overwhelm the buyer. If choices are too fragmented, then this creates uncertainties in knowing the extent of the market and understanding product value. Curation unclogs these markets by channeling choices and consolidating them, thus allowing consumers to profit from variety. It is an organized part of supply chains that is expanding alongside and in response to increased symbolic selection.

Curation reduces uncertainty in symbolic consumption.

Curation is fundamentally a way of lowering the uncertainty that attends the consumption of symbolic products. The value of symbolic characteristics cannot be objectively determined, and symbolically-intensive products are often so numerous that the parameters of choice are not fully understood. The curator lowers uncertainty by either directly making symbolic choices or by supporting these.

Curators do not mostly derive their utility from natural talents or skills. Because symbolic value is mostly socially contingent, the ability to curate depends on the curator's understanding of the prevailing symbolic system: including what symbolic characteristics are valuable in a time and place, and how the symbolic system is changing. A curator's ability to incorporate the curation signals of other curators is more decisive on their performance than any natural ability.

Because curators rely on other curation as a key input, they will organize in a way that improves their ability to absorb and transmit curation signals. This means creating sequential curation systems (cascades) that allow for them to acquire curation from less risk-adverse agents and transmit to more

cautious consumers and curators. Crucially, this also means agglomeration among other curators and producers. Agglomeration tends to benefit curators because it: a) allows for information to be shared more freely, b) allows curators to create and administer serialized cascades of curation, c) promotes coordination of what goods to consider, d) provides a degree of tastemaking power, and e) establishes brand power — a provenance premium — for curators and producers who come from the curating city. The hyper-concentration of many creative domains in space is consistent with the theory that agglomeration rewards curation.

Related Literatures

This study accepts the view that the intensification of something like creativity in the economy has contributed to a restructuring of urban areas and geographic space in general; Scott (2014) prefers the term "Cultural-Cognitive-Capitalism". The present focus differs somewhat. It is not primarily interested in the relationship between creative employment and economic development (Pratt, 2015; Florida, 2012; McGranahan and Wojan, 2007; Glaeser, 2004), nor in the internal geography and organization of a creative 'scene' (Silver and Clark, 2016; Lloyd, 2006), nor in what policies can animate creativity in a city (Florida, 2012; Landry, 2008; Jacob, 2010). These topics are already well explored.

This study arises out of an interest in the *function* of creative cities. It seeks to describe the roles that these structures play in the modern division of labor and in particular the activities that are better performed here. Richard Lovett and Fleetwood Mac travelled to Los Angeles from Milwaukee and London because L.A.'s particular "creative field" (Scott, 2014) was a place where they could more productively work in entertainment. This was not categorically true-- it would be harder to get work, harder to rent space, harder to get insurance on the city's disaster-prone properties and more. They moved nonetheless, because the city is supposed to ultimately raise the probability of success in an industry with long odds.

Therefore, this discussion has as much in common with the literature on the microfoundations of agglomeration as it does with the existing studies on creative cities mentioned above. Some of its key inspirations have been reviews by Duranton and Puga (2004) and Rosenthal and Strange (2004), which —

respectively — review theoretical explanations for why firms and workers cluster and empirical evidence on clustering.

The present study seeks to understand what is in it for those who join creative cities and clusters. The study does depart from traditional urban economics in that it pays particular focus to certain kinds of industries and occupations, presuming that there are special models operating in and around the creative economy.

Here, I propose that creative occupations and industries are generally centered in creative cities because those cities are fertile areas for curation. (Adler, 2014; 2010; Jansson and Hracs, 2018). Pure examples of curation include cultural criticism, executive search functions, artistic scouting, and — of course — selecting pieces to be shown in a museum. Forms of curation are found across all industries in the economy whenever the polysemic nature of symbolic products creates uncertainties surrounding their value, whenever an excess of symbolic products creates market organizing problems, or whenever symbolic products must be purchased before, they are consumed. It is somewhat common for knowledge workers to perform curation in the course of their work, much less so for workers (like art buyers or advertising executives) to primarily do curation. Curation is nonetheless more important than prominent discussions of economic activity would lead most observers to believe.

V Chapter Sequence

This thesis has 7 total chapters including the current one; five of these are conceptual and two empirical. Chapter 2 situates the curation function within the broad history and functioning of the economy. Product variety can be assumed to grow through economic development through the channels of greater consumer power, lower supply costs, a deeper division of labor and sectoral reallocation. As these processes continue, there is a more fertile environment for curation: markets are flooded with more variety and there are more things to curate.

Chapter 3 explains how curation comes to be demanded by increasingly complex markets. Curation is described as a means by which consumption knowledge about symbolically-differentiated

products is developed and transmitted. The chapter closes with a case study of publishing in renaissance England which emphasizes how consumers "learned to consume" (Witt, 2001) new varieties of the printed word and how curation functions emerged to spread consumption knowledge.

Chapter 4 scans the US economy to assess the prevalence of symbolically-differentiated products and curating occupations. It identifies the industry categories that produce symbolic products and the jobs that perform curation. In no small part due to the trends identified in Chapter 1, the symbolic and curating sectors command a significant share of all activity. It estimates that at least 34% of workers in the economy are engaged in symbolic production and that 17% of the workforce consists of curating occupations. It concludes that government statistics provide only a very rough estimate of how much curation there is in the economy, and that field-level studies will be more accurate.

Chapter 5 considers the curator's production function. It identifies curation's unique inputs and the forms of uncertainty that it reduces. Because curation is itself an industrial activity, it is subject to economies of scale. The chapter then describes five ways that localization (i.e., local scale economies) by curators and producers would improve curatorial productivity, discussing the implications of this for systems of cities. The chapter concludes by presenting basic estimates of how much curators agglomerate. These indicate that footloose curating occupations do indeed cluster more than average and that the most agglomerating occupations in the economy tend to be curating jobs.

Chapter 6 is a field-level, empirical examination of curation in the US music festival economy. It argues that multi-genre music festivals are prime sites for studying curation because they are now both central to the music industry and highly intensive in symbolic choice. It presents three smaller studies of music festival performances, using a novel dataset of 23,000 music performances between 2017 and 2019. The first establishes a relationship between selection to a festival (i.e., downstream curation) and prior (upstream) curation. The second concludes that acts from the programming firm's local context are more likely to be selected. The third — this one explicitly regional — identifies inter-regional trading patterns in festival performances, showing a very high degree of concentration in this sector. Almost 40% of all music festival performances in the sample come from LA, New York, London, or Nashville. It is shown that

absolute specialization in music production is significantly associated with the attention that these cities receive from curators who are upstream of the festival. The conclusion returns to the present discussion of the creative cities' literature and the general implications of the geography of curation for planning scholars and practitioners.

Chapter 2: The Growth of Product Variety Through Economic Development

Introduction

Economics has long been concerned with theories of product variety and the empirics of variety growth in capitalism. There are four basic causes of increasing variety during economic development: higher real incomes; lower trade costs that affect both final consumption through changing central place effects (market areas) and through intermediate output recombinations; lower indivisibilities or technological scale economies; and lower barriers to entry through lower fixed capital costs, often due to innovation. This chapter will review these and some of their contemporary manifestations after first reviewing empirical literature. It will then conclude by focusing on a distinctive sub-set of variety proliferation, which is products and services with a heavy subjective or symbolic content. This is the form of variety that curation seeks to manage.

I Facts on Variety Growth and Economic Development

Ford Model-Ts were famously available "in any color as long as it's black" but today's cars come standard in dozens of colors, and not just from Ford but from at least a dozen major manufacturers. The dramatic increase in the supply of car brands is a testament to how product variety tends to expand through economic development. This variety can be understood at the intra-category level (as is the case with cars) and across categories. In general, there is growth in the number of possible types of goods through economic development.

The record suggests that the history of variety in the automobile market is not unique. In the language of Bils and Klenow (2001:274), there has been an "acceleration of variety growth" over the last two centuries. Those authors study US consumption patterns between 1959 and 1999, finding that product groups with low variety gain (e.g., gas and postage) saw relatively slower growth than high-variety categories. The net effect implies a 1% annual increase in product variety over the period, and a higher rate of growth between 1979 and 1999. Broda and Weinstein (2004) show that over roughly the same period, the amount of imported variety increased three-fold. They estimate that 60 percent of US sales come from firms that sell over 700 unique products in at least 35 brands and at least 19 product groups. As these authors and

others (Redding et al., 2006; Jovanovic, 2003) argue, a focus on firm-level competition[1] can mislead investigators into thinking that variety is decreasing, when in fact there is much more choice than there used to be.

Market basket studies point to the accumulation of product categories. Appendix 2.1 shows such an analysis for 1953 --when the Bureau of Labor Statistics (BLS) first did such a study, for the years 1970 and 2017. The Consumer Price Index is designed to allow comparison across time and space, and the ideal market basket has maintained a somewhat consistent major category structure[2]. For instance, there have long been categories for Food, Housing, Apparel, Transportation, Medical Care, Personal care, Reading and Recreation, as well as a residual category. A new major category, Education and Communication, accommodates both educational services (which had been in the residual) and Information Technology. There has been even more variety growth within these categories at what the BLS calls the "detailed level". There are 160% more of what might be called "consumer goods families" in 2017 than in 1953, and 90% more than in 1970.

The case of food is illustrative. This category had consisted entirely of food to be eaten at home and resembles the list of food items from the bottom of the food pyramid[3]. Today it includes all these plus top of the pyramid items ("Sugar and Sweets", "Fats and Oils", "Non-alcoholic beverages and beverage materials", "Alcoholic beverages", and "Food away from home"). Prior to 1970, food from outside the home was categorized as recreation. It is not that these food types did not exist in prior eras, but that growth in and across these areas has prompted the development of new product categories.

The acceleration of product variety, beginning in the midpoint of the 20th century, coincided with fast growing income per-capita, as Figure 2.1 demonstrates. Growth in GDP per capita was somewhat

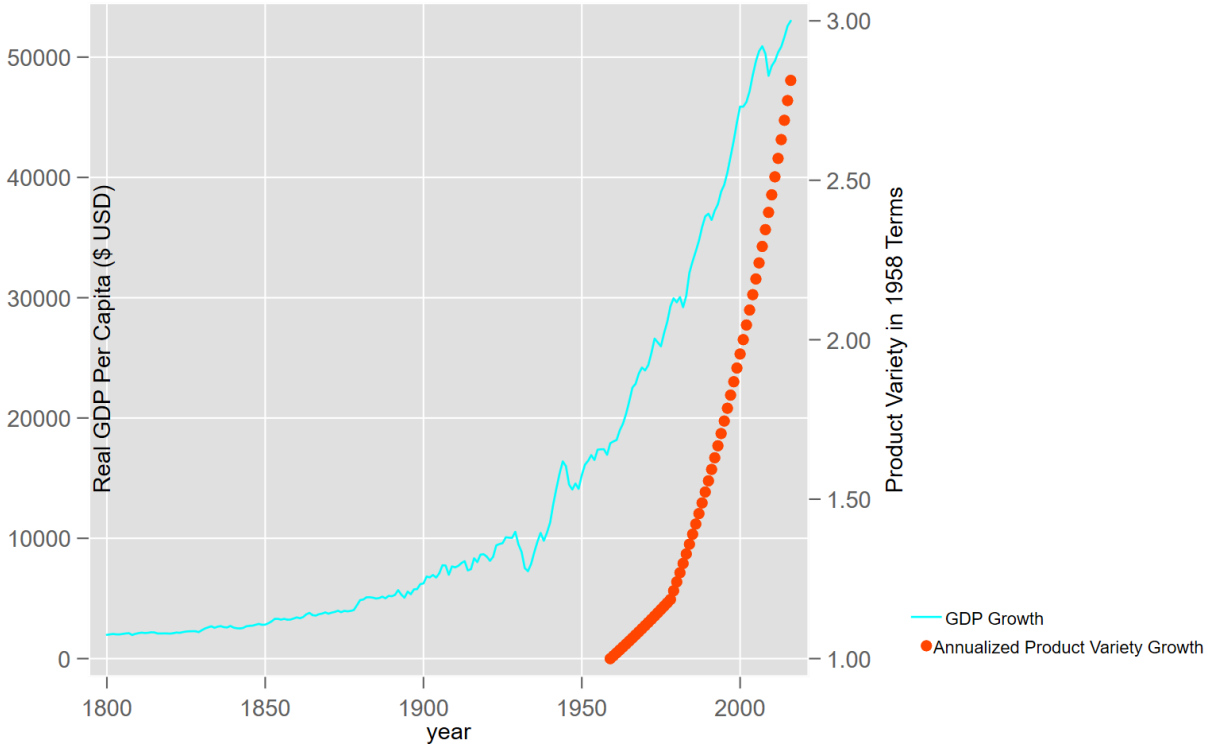
[1] It is common to measure firm-level competition through concentration indices. This makes sense for discussions of market structure but not product variety. We can easily imagine how a fully monopolistic Amazon.com might offer more product-level variety than all the firms in a quasi-competitive market.

[2] Armknecht et al., 1997 fully discusses the BLS taxonomy method. New major categories are only introduced every decade.

[3] "Cereals and bakery products", "Meats poultry and fish", "Dairy products", "Fruits and vegetables", "Other Foods at home".

modest during the 19th century and dipped during the Great Depression, before speeding up in the Post-War period, and through today, with minor stops along the way.

Figure 2.1 US GDP Per Capita Growth, 1800-2020



GDP Per Capita data from Maddison Project. Product variety growth data extrapolated from Bills and Klenow (2001)

II The Economics of Product Variety

Economic theory dating back at least to the 18th century suggests that economic development increases product variety. At the center of economics models are consumers who are assumed to have an unlimited potential taste for variety. This assumption frees economic theory to concentrate on the forces that allow for greater variety supply. Once again these are: increasing real incomes; declining trade costs; declining indivisibilities in production technologies; and lower capital cost or fixed cost barriers to entry.

Increasing real incomes and consumption of cost-disease outputs

Economic development is accompanied by growing real incomes[4] and an increase in quantity demanded across almost all broad categories of goods. As an example, Aguiar and Bills (2014) calculate the sensitivity of total demand to income for 20 categories of goods, finding a positive coefficient for all non-tobacco goods. In general, demand tends to respond more positively to changes in income than changes in prices (Chai, 2016; Brown and Deaton, 1972).

Development also involves unbalanced productivity improvements such that the share of economic activity devoted to capital-intensive sectors like agriculture and manufacturing can decline even as total output increases, while the share of service-intensive sector employment increases. Baumol (2012, 1967) calls the latter "cost disease" sectors, singling out education and healthcare. Demand for cost disease sectors is buoyed, then, by two ongoing dynamics, growth in wealth and technical progress in the more automatable areas of the economy.

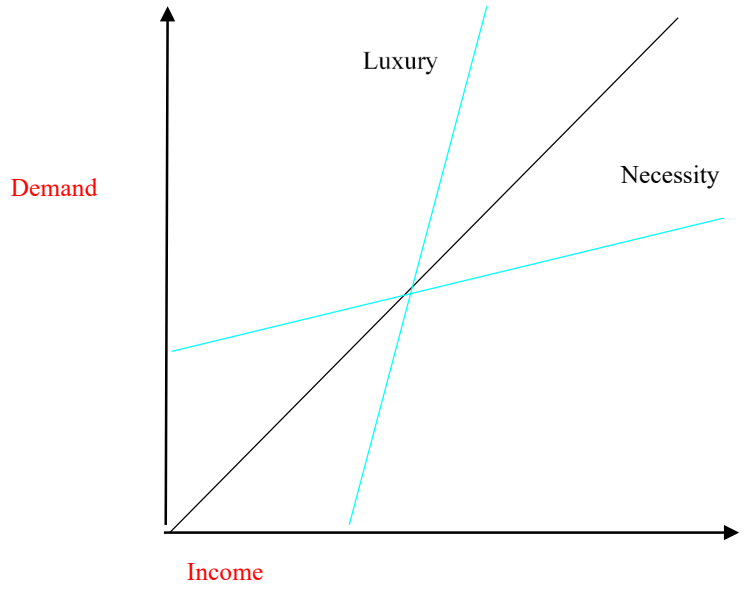
Growth in cost disease sectors amounts to variety growth in the economy. Insomuch as the human input into cost disease sectors is relatively more important, then the outputs of these same sectors will be varied because personal services vary with the unique people providing them. 'Bedside Manner' and 'Teaching Style' are ways of describing a certain, singular (Karpik, 2010) or at least incomparable character belonging to personal service. Because of this, the market for education and health services is anything but standardized. Medical expertise, then, is not like a homogeneous commodity—clients seek second opinions all the time; and education at the high school level and beyond almost always involves learning via multiple sources. For all these reasons cost-disease style budget reallocations involve shifting income from lower variety to higher variety sectors.

4 Secular real income growth tends to be driven both by increases in productivity, but they can also be driven by a more egalitarian income distribution.

Increasing real-incomes and luxury consumption

Higher real incomes will lead to a relatively higher consumption of luxuries vs necessities as a share of budgets. Figure 2.2 plots an "Engel Curve" showing a ray from the origin signifying unit elasticity. The response of necessities to income is less than unit elastic—these are less sensitive— while more and more luxuries are demanded at each level of income. Just as above when growing budgets tend to be more afflicted by cost disease, here they are more devoted to luxuries.

Figure 2.2 "The Engel Curve"



Economic theory is not concerned with defining goods as luxuries or necessities based on their characteristics. Luxuries are any goods that rise relatively fast with income and necessities are those with less elastic response. In the example above, tobacco is an inferior good that is consumed less at higher incomes. There are robust empirical regularities related to what kinds of goods count as luxuries (Clements, 2019; Houthakker, 1957; Engel 1957). The most accepted of all of these and the inspiration of the title of the above figure is Engel's Law, which is that the share of expenditure on food declines with income. Clothing, housing, and heating and lighting were additionally more like necessities. Personal services, and intellectual education (i.e., costs disease goods) are more like luxuries.

Evidence on the relationship between income and variety itself comes from Li (2019). He directly studies how household spending market basket variety vary in India. He discovers that, even controlling for features of retail supply, there is a "variety Engel curve", that is wealthy households buy more kinds of goods within categories. Data on bilateral trade also suggests an income/variety relationship. Wealthier countries in income terms import more varieties (See Auer and Saure, 2012 for a review).

Decreasing Trade Costs Part 1: combination of intermediate inputs into more final varieties

Economic development is propelled by technological and organizational changes which lower the costs of trade. That lower trade costs lead to trade and improve the variety of final consumer goods is a basic implication of Ricardian trade models. If one country makes port and another sherry, then there will be more variety for the consumer under trade than autarky. Prominent endogenous growth models (Rivera-Batiz and Romer, 1991; Romer, 1987) show that import variety will lead to lower costs for research and development and the creation of new final product varieties. An increase in the diversity of inputs expands the number of theoretical combinations between these and other inputs, leading to final goods diversity.

Exogenous decreases in trade costs have been linked to expanded input and output variety. Goldberg and colleagues (2010) show that lower trade costs were responsible for 31% of new products made by Indian firms. Klenow and Rodriguez-Clare (1997) find that when input taxes decline by 1 percent, output variety grows by half that. Amriti and Konings (2007) conclude that lower input duties are responsible for more productivity growth than lower output duties are due to this variety-expansion effect. Broda and colleagues (2006) estimate that new import varieties drive 10% of total factor productivity growth on average, and 25% in developing countries.

Decreasing Trade Costs, Part 2: geographical reallocation of central place effects

In classic location theory, consumers are said to be governed by different travel ranges for different products, and these depend on trade costs (Christaller,1933; Reilley, 1931). Consumers will tend to have lower ranges for basic products and higher ranges for specialized ones. Central places are markets that, due to their location, minimize access costs providing access to a wider range of products.

The more central an area it is—that is the lower its access costs-- the more varied it will be as a market. The continued relevance of this idea is confirmed by modern observers (van Meeteren, 2018; Shearmur and Doloreux, 2015; Neal, 2011), especially in the case of retail services. Larger cities that are connected to transportation infrastructure tend to have more types of goods and services. Handbury and Weinstein (2014) show that this is true even for more basic, staple-type goods in their study of barcode data. Consumer access to variety tends to increase as trade costs are reduced because consumers can access 'central places' from more peripheral locations. It is for this reason that the emergence of regional shopping centers tends to increase access to variety for the average consumer. Compared to a traditional high-street, the large suburban shopping complex, with its highway access and larger number of sellers, can provide more selection and less access costs (Olšová and Jánská, 2016; Mark et al., 1966; Lakshmanan and Hansen, 1965).

It is partly via the market access channel that digital marketplaces dramatically expand economy-wide product variety. The internet is itself a 'central place' to which the trade costs of accessing the marketplace are relatively very low. Mostly, it just takes one internet connection to travel to the marketplace, and the market area corresponds to the area where a logistics infrastructure can be erected—usually a country. There are minimal costs involved in searching for or purchasing a product (Goldfarb and Tucker, 2019; Brynjolfsson et al., 2011). Because the market area is expanded, relative to a high street or regional shopping center, a market such as Amazon.com can rationalize an even greater amount of variety. As search costs decline, customers search more and this itself means that each firm has access to more customers (Quan and Williamson, 2018).

With increasing incomes, it is also possible for variety to come to the consumer via more points of sale. This was true of the restaurant industry in the second half of the twentieth century in the US and Europe. As incomes grew, consumers shifted a large proportion of their food purchases from grocery stores to fast food and full-service restaurants (Stewart et al., 2004; Fantasia, 1995). This shift meant growth in the number of food outlets and the proliferation of this concept across space. That meant a more suburban

geography for American fast food than French fast food (for instance) but in both cases wealthier consumers were better able to support more purveyors of food.

Income effects generally tend to oppose these market access effects. When trade costs decline, the average market area for any seller tends to increase and when incomes increase, the market area tends to decrease (i.e., market areas for a new suburban restaurant are smaller than they would be for a store.) In both cases, however, there tends to be more access to variety. The regional shopping center and online platform bring more net variety to the consumer than the high street store. The net variety of food products for sale in the year 2000 is higher due to the greater number of restaurants.

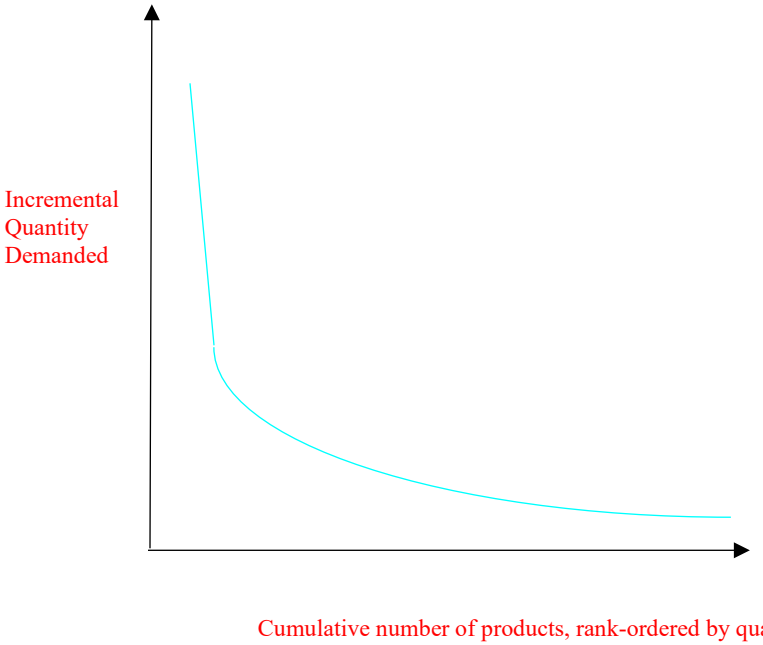
Decreasing economies of scale: lower technological indivisibilities

Innovation can lower the minimum scale requirements for capital, reducing the output threshold of production and increasing production scope. An indivisibility is the minimal output scale necessary to justify production. The presence of fixed costs implies positive indivisibilities, and these are assumed in economics of urban infrastructure (Duranton and Puga, 2001) and manufacturing (Scarf, 1994). Higher indivisibilities tend to mean less specialized outputs. Imagine that there is a market for size 7.5 shoes that can only earn half enough revenue to justify its production and, in parallel, a market for 8.5s that can also only earn half. In this case, we would expect for both markets to be accommodated by a market for 8s. The average consumer has worse-fitting shoes. In the absence of indivisibilities, a producer could make exactly as many half sizes as the market demands, and the net diversity of fits would be higher.

Lower technological indivisibilities led to the transformation of the United States steel industry in the 1980s and 1990s. Earlier steel technology relied on blast furnaces to make steel out of iron ore. Newer 'minimills' were able to use smaller electric furnaces to make steel out of scrap metal (Stubbles, 2000; Labson and Gooday, 1994). A minimill plant was roughly 20% of the size of an 'integrated plant' (Chavez, 1994). The new technology was most advantageous for producing rod and bar type steel outputs and it greatly expanded the variety of these materials available to the local construction industries near the plant (Barnett, 2011).

Similarly, the arrival of ecommerce for physical products has lowered indivisibilities for retail in a variety-enhancing way. In the traditional retail model, shelf space is a significant fixed cost, representing the cost of the shelf itself, underlying land costs, theft, and more. Products must recover their share of these costs to justify their presence on the shelf. The e-commerce product has a much lower hurdle to clear. It only needs to earn enough to justify its place on a warehouse shelf somewhere in the logistics area—not necessarily in a place that the consumer would be interested in traveling to. This lower barrier marketplace is now known as the "endless aisle" (Zimmerman, 2012). In addition, the chance of theft is low and because the market area is larger (per above) products can justify their availability at much lower scales. It is for this reason that Anderson (2007) calls digital markets "long tail" markets (See Figure 2.3). Niche products toward the right of the distribution become more feasible without retail indivisibilities.

Figure 2.3 'The Long Tail'



It is important to not overstate the impact of modern technology on technological divisibility. A technology that is superior in other ways can raise threshold requirements and end up lowering product diversity. Consider the IMAX film exhibition technology. It provides a more immersive experience that is superior for action movies and documentaries, but it is also significantly larger and more capital-intensive.

These and other factors mean that it can only be supported on 1500 screens (IMAX, 2016) and that only mass-market products can earn back the additional costs. The effects of new technologies on variety can also differ over time. Yang (2020) shows that the shift to digital projection in South Korea led to more variety overall but less during peak times. Niche customers had less access to those titles on weekend evenings.

Decreasing economies of scale: lower fixed cost barriers to entry

A related channel from development to more variety is lower fixed costs to production. These make market entry easier for producers of new varieties. Reductions in some fixed costs change the minimum scale at which a fixed cost is viable and reductions in others eliminate entry costs.

The economy will periodically undergo fixed cost eliminating technological change due to environmental and technological shocks (Schumpeter, 1983). We seem to find ourselves in such a period, one that has been christened the '3rd Industrial Revolution' (Rifkin,2011). This series of changes would include the digitization breakthroughs mentioned above as well as ongoing advances in the ability to customize goods for more varied uses and markets. These technological advances are recognizable in breakthroughs in robotics, 3D printing, and data analytics (Tien, 2012). The Model T 'was available in every color as long as it was black', because black was the only color that could dry before a car was processed by an assembly line (Kurylko, 2003). Modern car paint does not impose this monochromatic restriction.

Music has similarly seen dramatically lower barriers to production in the form of portable recording equipment. In the 20th century music production model, the means of production for professional music were contained within music studios themselves (Graham et al., 2004). Recording devices, professional quality microphones and mixing equipment were all too expensive for new music acts to afford and the recording contract was necessary to produce music at a professional grade. Digital music recording changes this considerably, allowing unsigned artists to record music at a high quality and directly release it to the market (Passman, 2015). Drake, The Weeknd, and The Arctic Monkeys are just several modern musicians who achieved superstardom before they were signed by music labels, on the strength of internet play. They

demonstrate that recording barriers per se are not relevant to the modern music industry. In subsequent chapters, we will come to see that music labels do add value as curators and marketers of music; however it is recorded.

III Symbolic Variety Growth

The recent acceleration of product variety has been largely driven by products with symbolic content, especially cultural products (Art, Entertainment, Education) and investment products (Finance, Venture Capital). The setting for this study is the universe of products that derive most of their value from what they represent as opposed to what they are. This section defines symbolic products and sketches why they have grown recently.

Symbolic and Objective Characteristics

Product characteristics have different ontological bases for their value. Objective characteristics are rooted in physical properties and objectively verifiable performance: an anchor is heavy, a sandwich is caloric, a microprocessor is fast and so on. Lancaster (1966) calls these "objective characteristics", by which he means that they are the "the same for all consumers and, given units of measurement, are in the same quantities (134)".

Symbolic characteristics can only be evaluated in reference to an external, socially-defined ranking system[5]. Elsewhere, Witt (2010) and Heffetz (2009) speak of "symbolic consumption" in similar terms. Hats are largely symbolic. An American-style baseball cap will be essential (and therefore valuable) in some contexts and inappropriate in others, depending on the prevailing fashion conventions. Even more obviously, *The Mona Lisa* would not be the most valued painting in a parallel world with a separate set of symbolic associations. Curators must interpret and assess symbolic characteristics.

It may not always be easy to divine objective characteristics, but such knowledge is knowable with reference to the object itself. In the case of a fridge, you might not be able to tell how energy efficient it is, but because that knowledge is knowable, you can likely find how it has been rated on the relevant metric. In

contrast, the value of a symbolic characteristic depends on what that symbol represents, either to the individual or to some community of consumers. Symbolic associations may sometimes appear to be objective facts, but as Pierre Bourdieu (2010,1991;1983) says, these are objective only in the sense that they are "social facts", meaning they are agreed by some social system to be true at a given time. Along these lines, Beckert (2011) proposes the concept of "imaginative value" to describe value that cannot be understood from the materiality of a product but instead "emerges from the imaginative connections made between goods and socially rooted values, as well as the aesthetic ideals held by the purchaser" (3). Curation is a function that helps consumers make sense of these opaque symbolic characteristics.

Symbolically-Differentiated Products

As Lancaster (1966) notes, the value of all products can be reduced to the value of their respective individual characteristics with the sum value of characteristics determining how a product is valued at market. Goods are more or less symbolic depending on the degree to which symbolic characteristics determine value. Symbolically-differentiated products are those where symbolic characteristics primarily or entirely decide value. These are markets where influence of the symbolic on price greatly exceeds the influence of the objective.

The comic book market is symbolically-differentiated. Two comic books might have the same dimensions and page count, but one might be coveted as a collectible and other the might end up lining a birdcage. The difference depends on how the symbolic system governs the value of each, and not on any stable objective factor. Here, the term "symbolic products" is reserved for those that are unambiguously driven by symbolic value.

In contrast, the market for heating services is mostly objectively-differentiated. A provider of these services will either provide heating or not. They will generate heat from one of a set of discrete technologies and materials. They will do so at a stable rate that is not subject to change. What heating represents[6] will

[6] The exception would be environmental considerations. A small segment of the heating market prefers a 'sustainable' energy source, but this segment is not at all representative.

generally not affect its market value. Other products with minimal differentiation include lumber, chemical solvents and fabric sold by the yard, or utilities.

It is common to encounter some markets that rely on an even mix[7] of symbolic and objective characteristics (Beckert, 2011) to determine value. In the home refrigerator market, the symbolic characteristics (design, color) and objective characteristics (energy efficiency, performance) will both affect the product's value. On the other hand, the market for industrial fridges would mostly rely on objective characteristics to determine price.

Symbolic Variety Growth

Based on the evidence presented above, symbolic variety growth appears to be outpacing objective/performance-based variety. Baumol-effects suggest that more of the budget share is going to goods in personal service industries, and as we have seen these are intrinsically more varied because they depend on human inputs. Similarly, Engel-type results show that more household income is devoted to underlying needs (safety, education) that are more polysemic, and that defy simple performance-based valuation.

A small economics literature on the ready to eat cereal industry in the US underscores that variety growth tends to be symbolic. In this sector the nutritional characteristics of products are not significantly related to their price) but retail (i.e., market access) and brand (i.e., symbolic) characteristics are (Richard and Hamilton, 2015). Cheerios are valued more than the equivalent house brand because these subjective factors matter. Thus, when between 1980 and 1992 some 190 cereal brands were introduced to a market that only had 160 brands to begin with (Nevo, 2001; Hausman, 1996), it was symbolic differentiation (e.g., Honey Nut and Apple Nut Cheerios) and not changes to the underlying technical processes that were responsible. Figure 2.4 underscores this by comparing the nutritional content of two new cereal variants. The variants are equivalent in terms of basic calories and do not differ in terms of their major (first listed) ingredients.

[7] Chapter 4 is primarily concerned with differentiating symbolically-differentiated products from mixed and objectively-differentiated ones.

Figure 2.4 Disclosed Ingredient Information for Two Cereal Brands

	'Honey Nut' Cheerios	'Apple Cinnamon' Cheerios
Ingredients	Whole Grain Oats, Sugar, Oat Bran, Modified Corn Starch, **Honey**, Brown Sugar Syrup, Salt, Triopotassium Phosphate, Canola and/or Rice Bran Oil, **Natural Almond Flavor**, Vitamin E, Vitamins and Minerals: Calcium Carbonate, Zinc and Iron, a B Vitamin, Vitamin B6, Vitamin B1, Vitamin A, a B Vitamin, Vitamin B12, Vitamin D3	Whole Grain Oats, Sugar, Brown Sugar, **Corn Meal**, Modified Corn Starch, Corn Syrup, Canola And/Or Rice Bran Oil, **Apple Puree Concentrate**, Salt, **Cinnamon**, **Trisodium Phosphate**, Sodium Citrate, Artificial Flavor, **Wheat Starch**, Vitamin E, Vitamins and Minerals: Calcium Carbonate, Zinc and Iron, **Vitamin C,** a B Vitamin, Vitamin B6, Vitamin B2, Vitamin B1, Vitamin A, a B Vitamin, Vitamin B12, Vitamin D3
Calories Per 100g	110	110

Many products in the economy are like cereals. The original Levi's 401 jean is still in wide circulation, albeit in dozens of colors and fits. The fridge described in the prior section will tend to have a common set of features across many brands. Wine comes from more and more places, and this provenance affects its price, but the supposed impact of terroir on taste is mostly undetectable in an experimental setting (Ashenfelter, 2008).

Explaining Symbolic Variety Growth

Consistent with the economics of variety reviewed in Section 2, the acceleration of variety growth can be explained by changes in real income and entry barriers. Most relevant on the income side is the already reviewed tendency for cost-disease services and luxuries to be more symbolically differentiated. On the cost side, we have already seen that car colors became more abundant as new fast-drying paints were discovered. The fixed costs and indivisibilities governing products like clothing, entertainment, and investment products have also dropped.

The apparel industry offers an obvious example. 'Fast Fashion' is a production mode that allows for the producer to forego its own design activities and instead quickly absorb the fashion ideas of others (e.g., via fashion shows) quickly turning these into manufactured products. It results in much more product turnover within a standard fashion season than is common in the traditional model (Simona Segre, 2005). Tokatli's (2008) study of Zara makes clear that this system is made possible by a modern supply chain that delivers fashion ideas and products to stores fast enough to compensate for non-existent R&D functions. Additionally, a modern information infrastructure is needed to properly gauge consumer demand and ensure that upstream manufacturing is responsive to quickly emerging preferences. This story of long and responsive supply chains is generalizable across a range of sectors.

The digitization of many symbolically-differentiated products has arguably been even more transformational than longer supply chains. Many formerly analog markets have become entirely or largely digitized—that is their material base has been converted into bits and bytes (Jones et al. 2016). While statistics corroborating this are elusive, it does seem that most digital products are also symbolically differentiated. There are digital cultural goods such as books, music, film and video, games, and journalism and digital investment products, and digital versions of some educational and medical services, all of which have a strong degree of symbolic differentiation[8]. Purely objectively-differentiated digital products are hard to fathom. There is no such thing as digital heating, or for that matter digital power and water, digital sustenance, or digital commodities such as iron ore. There are, of course, many symbolic products (e.g., food and wine, security services) that are not digital but, as a rule, products that are sold in a digital form are symbolically-differentiated.

What does digitization mean in the sectors that it touches? Per the discussion in Section II, it means lower fixed costs to production and lower indivisibilities. Significantly, digitization relieves almost all shipping costs. A digital device and an internet connection are the minimum requirements to shipping a product worldwide.

[8] The next two chapters will delve into what sectors are and are not symbolic in a more detailed manner.

The digital product is subject to even lower indivisibilities than an e-commerce product. The physical album sitting on an Amazon warehouse shelf pays a very small share of a small real estate costs, but the digital album sitting on Amazon's servers pays significantly less. Lower production costs are implicated in a dramatic expansion of variety and selection for digital markets, as studies by Waldfogel and colleagues make clear. The number of self-published books has accelerated since the introduction of the e-book (Waldfogel and Reimers, 2015); the number of music products tripled eight years after Napster (Aguiar and Waldfogel, 2018) and the variety of film titles expanded by some 250% between 2000 and 2012 (Also see Yang, 2020). The next chapter considers how demand for rapidly growing symbolic variety is organized.

Appendix 2.1: Consumer Price Index Categories: 1953 and 2017 (BLS, 2018)

	1953	1970	2017
Number of Major Categories	8	8	9
Number of Detailed Categories	15	21	40
	Major Category		
Detailed Food Categories	5	6	9
Detailed Housing Categories	5	5	8
Detailed Apparel Categories	1	3	4
Detailed Transportation Categories	1	4	7
Detailed Medical Care Categories	1	1	3
Detailed Personal Care Categories	1	1	3
Detailed Reading and Recreation Categories	1	1	2
Education and Communication	Did Not Exist	Did Not Exist	4

Chapter 3: Curation and the Organization of Demand for Symbolic Goods

Introduction

This chapter seeks to explain how the proliferating supply of symbolic variety described in Chapter 2 is accommodated on the demand side of the market. The main theme of this and the remaining chapters is that markets do not spontaneously arrange demand for symbolically-differentiated goods. This is due to the polysemic nature of symbolic characteristics-- the intrinsic indeterminacy of any symbol's value. It is also due, increasingly, to the oversupply of symbolic goods in some markets, which has led to the feeling of being overwhelmed by choice. Curators organize demand by providing relatively stable and codifiable cues about how to value symbolic characteristics. These cues allow for what are horizontally-differentiated, incomparable products to operate as though they are vertically-differentiated. These cues also help to single out some products from the undifferentiated, and perhaps overwhelming selections that characterize many modern symbolic markets. This chapter defines curation in detail, identifies the precise nature of its value and describes how it operates in markets. It sets the stage with a review of the economics of demand for variety.

I The Consumer Demand Function

In standard economics, the relationship between consumer demand for variety and income can be expressed through what Li calls the "Engel variety curve". As incomes increase, so too does the average variety demanded. This relationship is consistent with standard economic theory which imagines indifference curves between two goods that are convex to the origin. It is also implied by models of monopolistic competition wherein consumers gain more utility as they consume more product variety (Fujita eta al., 1999; Krugman, 1991).

Two features of such a demand function serve as important background to a discussion of curation. First, the demand curve extends upward indefinitely. More selection is always preferable and there are not diminishing returns to variety or plateaus. Second, if costs per good drop, then the total variety demanded will increase. Together, these features suggest that the ongoing changes described in Chapter 2: increasing

incomes, more intermediate output recombination, lower indivisibilities and lower fixed costs will tend to continuously lead to ever more demand for variety.

In this standard framework consumer demand for variety is insatiable. The only variety problem that can exist in the economy is that there is too little variety supplied. The suggestion, for instance, that limits to the consumer appetite will ever curb the development process is absent. What such a model does very well is explain the coincidence of variety and economic development. Consumers have been very good at absorbing the variety possibilities that new technologies and higher incomes provided for them.

What the standard framework does not do is explain transitions in the demand for specific sectors or products. Because it assumes stable and homothetic preferences, it does not allow for us to anticipate what goods will be luxuries or normal or inferior at a given time or in each place (Witt, 2001). It cannot, then, suggest a theory for why Aguiar and Bills (2014) find that tobacco products are inferior in the modern United States, but normal in other places and times (e.g., the 13 American Colonies)

There are currents within economic theory which do seek to explain changing demand income elasticities via an underlying hierarchy of needs (Chai et al., 2013; Maslow, 2013; Ruprecht, 2007; Menger 1976). Needs are the "behavioral dispositions which arise from a state of deprivation of an organism," (Witt, 2001: 26). They are the ends to which consumption is directed. Before a new good can be demanded, it must be understood to satisfy an underlying need. Basic needs related to nourishment, safety and warmth are primary and must be fulfilled before things such as love, and amusement and satisfaction can be looked after.

If demand for goods is an extension of needs, then observed variety growth has depended *both* on the changing income and supply conditions that were reviewed in Chapter 2 and on continuous demand adaptations. For wholly new varieties to be absorbed by consumers, they must necessarily satisfy underlying needs. Because new varieties are 'new' they tend to either satisfy new needs or respond to existing ones in new ways. Consumer preferences are eternally voracious and evolving.

A needs framework is well suited to explaining Engel's Law-type regularities (Clements, 2019; Iscan, 2010; Houthakker, 1957; Engel, 1857). The need for nourishment tends to decline because it is somewhat more easily satisfied as income grows, and therefore the relative demand for food (and the absolute demand for 'inferior' food) declines. Demand for education increases in relative and absolute terms because the underlying 'thirst for knowledge' or social status (Frank, 1985) is more insatiable. The demand structure in each time or place will reflect which needs are present and which are satisfied. On average, more developed economies will respond to basic needs better and consumers there will be more concerned with high-rung needs.

As the development context changes, some needs enter the consumer's utility functions and others leave. Theories of how preferences evolve to respond to needs tend to center processes of learning and discovery (Chai et al., 2013; Stiglitz, 2008; Witt, 2001). Consumers will learn about new products and how they respond to existing needs, and about new needs or to understand current needs in new ways.

The process of "learning to consume" (ibid) is less relevant at the level of the macro-economy. Overall consumer demand is reliably voracious and consumer learning is efficient enough that the binding constraints on variety tend to come from the supply side or the overall income level. However, this changes as you 'zoom in' to the product category and individual product levels. Here, producers do not have the luxury of assuming that preferences will keep up with supply. It matters to the cigarette firm, then, that there are income thresholds beyond which its goods are inferior and similarly the notion that "lifelong learning" is necessary, is most useful to continuing education divisions of universities. The entire advertising and marketing industry with its hundreds of billions of dollars in revenue is a testament to the importance of 'teaching' the consumer about what they want, what they need and ultimately what they ought to demand (Stiglitz, 2008).

II Curation as Preference Formation

The central premise of this study is that product discovery in the symbolically-differentiated area of the economy tends to depend on a curation function. This section defines curation and explains the origin of its demand in symbolically-differentiated markets.

Defining Curation

The terms "curation", "curate", and "curator" have recently seen heavy circulation, as the New York Times' Lou Stoppard (2020) observes. He reviews how the term, which was originally reserved to describe the selection of exhibition materials in museums and galleries, has become a buzzword used to market this or that selection. It is easy to imagine Stoppard rolling his eyes when he says:

> "It is, most of the time, something very banal. Menus are curated. A cheese selection is curated. There is a strong emphasis on selling it back to you with authority. It doesn't say who curated it. Is it the brand doing it? You'd hope that they were doing the supposed curating already. What's an un-curated cheese selection?""

In its use as a buzzword the term projects the sense that the customer has nothing to worry about because the curator is looking after everything. Its close cousins are 'handpicked' and 'carefully chosen'. This study understands curation as a much broader function in the division of labor for symbolic products.

Curation is the process of choosing among symbolically-differentiated products or facilitating this choice. The curator will either make consumption decisions on behalf of their clients or advise on how to make these.

Curation is happening anytime:

- One symbolically-differentiated good is chosen over another, or
- One symbolically-differentiated good is recommended over another, or
- A subset of symbolically differentiated products is selected from a wider market, or
- Symbolic characteristics are ordered or ranked, or
- Symbolic valuation systems (e.g., the system according to which The Mona Lisa is valuable) are developed, and more.

Therefore, curation is not exclusively or even primarily an 'end of the pipe' activity, performed directly for a final customer. Often, the most important curation decisions are made very far 'upstream' — out of sight and out of earshot. Buyers and advertisers and marketers and schools and so many more actors make curation decisions about products and their components before a final product is handpicked for the consumer. In many cases neither the customer nor the final curator of the sort that Stoppard describes has much to worry about, because the out of site selectors have already made the important decisions.

Curation is easiest to understand as a final good because we tend to directly observe it in this form. We see the film review and the museum collection. However, like the economy itself, most of the curation economy consists of intermediate functions and products that cannot be directly detected by final consumers. The hiring decision is a clear intermediate product, that only appears as a final product in extreme cases like executive search.

Retail selection is a widespread upstream curation function. Retailers must decide what items to stock and put in their storefront and although many decisions can be based on sales performance, some must ultimately hinge on the symbolic[9]. As customers, it is easy to mistake what we see in an aisle for the universe of selection when it is only the small galaxy that the retailer wants to sell.

The length of the modern curation supply chain can boggle the mind. The smart looking office chair on display was curated among all the chairs in stock, which were curated from all the chairs in the wholesale catalog, which were curated from all the chairs in production, which were curated from all the designs and prototypes from all chair producers and so on. Meryl Streep's character in the film *The Devil Wears Prada,* might have put it best. She, the editor of a fashion magazine, disabuses her naive assistant of the premise that she independently chose her cerulean sweater:

> You go to your closet and you select out, oh I don't know, that lumpy blue sweater, for instance, because you're trying to tell the world that you take yourself too seriously to care about what you put on your back. But what you don't know is that that sweater is not just blue, it's not turquoise, it's not lapis, it's actually cerulean. You're also blithely unaware of the fact that in 2002, Oscar de la Renta did a collection of cerulean gowns. And then I think it was Yves St Laurent, wasn't it, who showed cerulean military jackets? And then cerulean quickly showed up in the collections of eight different designers. Then it filtered down through the department stores and then trickled on down into some tragic "casual corner" where you, no doubt, fished it out of some clearance bin. However, that blue represents millions of dollars and countless jobs and so it's sort of comical how you think that you've made a choice that exempts you

[9] This tends to be truest of new products, for which empirical data is not available. If there are two new widgets for sale at your store this holiday season, which do you stock more of, which do you promote, and which do you send an email about? Your decision will greatly affect the consumption behavior of your clients, even if they are not aware of it. You will be selecting a smaller set of products from the wider product universe.

> from the fashion industry when, in fact, you're wearing the sweater that was selected for you by the people in this room. From a pile of "stuff."

Similarly, by the time a cheese makes it to Stoppard's curated board, the systems of curation that are to be discussed in this study have already done the lion's share of their work. All the charcuterie chefs in the city of London might not collectively be able to take as much credit for the rise of halloumi as an 'it' British cheese as celebrity chefs like Jamie Oliver, who championed it early — or the chain cafés Prêt à Manger, which put halloumi in its fast casual lunches (Cooke, 2013). In such a context, a restaurant that flogs a 'curated' cheese board is to be sure exaggerating its role.

Here, the curator is an economic functionary who supports the demand adaptation processes that are required by the economy. They support up to two stages of preference discovery:

- They help to identify the needs that a class of products will serve, and
- They connect consumers with products that best satisfy those needs.

Why symbolically-differentiated products demand curation (and other products do not)

Preference discovery among objectively-differentiated goods is more straightforward because it is anchored to physical laws and performance. The faster semiconductor and the lighter suitcase and the more energy efficient fridge are always better. If you were to transport someone from ancient times to today and ask them to product test several microwaves, they could figure out which was more valuable through trial and error. The grounding of objective value in physical laws and performance, means that preference and product discovery are less costly with objectively-differentiated products. So long as producers can certify that their products have these characteristics, there will be less need for an intermediary.

Preference formation for symbolic characteristics, and by extension for symbolically-differentiated goods, is rooted in an evolving, socially-nested system. In this system, there are never fixed rules defining what symbolic characteristics are valuable—both because each successive symbolic product is itself singular (Karpik, 2010)--that is not fully describable by the codes that came before it-- and because symbolic meanings are always changing.

Our same time traveler could not reliably guess that *Citizen Kane* is superior to Adam Sandler's *The Waterboy*; as either a revenue-generating product or a cultural artifact. They might even choose the coarser movie because it is in color (i.e., based on an obvious objective feature and not a symbolic characteristic).

Each culture will have its own quasi-stable symbolic codes for determining what needs a good is supposed to fulfill and how well it does so. In ours, the introspective and elliptical character of Orson Welles' film helps to set it apart as more valuable, and it is decided that films like these can contribute to personal development while transparent films like *The Waterboy* only provide cheap entertainment. But this is not an inevitable outcome. In a parallel universe, Adam Sandler's slapstick might just as well be considered the equivalent of high art or even a religious experience. We can probably imagine an overly wrought (to us) graduate thesis obscurely arguing that it is an important movie, and so it is not preposterous to imagine an entire market adopting this idea.

We are more like the time traveler than we might assume. We also do not know that Citizen Kane is a great movie in the same way we know that a modern computer is faster than an old mainframe. Any confidence about how to value symbolic goods, comes through acquiring knowledge about them and the wider symbolic system. Curators are providers of this knowledge. Invoking Witt, we can say that they are professors of consumption.

If knowledge about products and product categories was freely available at the point of purchase then we would have no need for curation, but such knowledge is scarce. Most symbolic goods are "experience goods", meaning they must be purchased before their quality can be fully evaluated (Nelson, 1970), if then (Darby and Karni, 1973). Sometimes we leave a movie theater without being sure that our money and time were well spent. And because movie quality cannot be guaranteed (due to the subjective nature of its value), there is real downside risk to consumption.

In many contemporary symbolic markets this inherent risk is even more acute because symbolic products appear to the consumer to be oversupplied. Global marketplaces, digital platforms and the

digitization of symbolic products have together created a sense for some consumers that there is too much variety to handle. Excessive choice can be psychologically disorienting; (Iyengar, 2010). Schwartz calls it the "paradox of choice". The sheer vastness of these markets means that consumers do not even know where the market begins or ends and can therefore struggle to even begin the process of optimizing or satisficing.

Filtering the market to something manageable is less costly in the case of objectively-differentiated or mixed goods than with symbolic goods. As of this time, the US Amazon marketplace for refrigerators has a selection of more than 2,000 fridges but it also provides product filters, corresponding to objective features like price, size, and energy efficiency. Using these it is possible to winnow an unimaginable number of appliances down to just a few. At that stage, one might still struggle with symbolic decisions (Maytag or Westinghouse ?; red or grey?) but the lion's share of the filtering has already been done.

At Amazon's Prime Video marketplace, the objective filter will not be enough. Genres are helpful but these themselves are squishier concepts subject to much more debate about boundary conditions. Within a genre like comedy there are dozens or even hundreds of selections. There is no shortage of symbolic categories designed to filter products even further (i.e., "zany comedy", "cerebral comedy") but the subjective nature of these means that they will not reliably guide the search process.

Enter the curator. The retail curator aids in product search by reviewing films before-hand, but also by listing a small set of films among a wider universe to consider, or by in some way defining the relationship between films and needs. A Wesley Morris-type film critic is a curator, but so is the directory that lists new films in some order, and so is the op-ed writer who argues that films by under-represented directors should be valorized. Farther upstream, curators winnow down massive selections before they reach the consumer level of movie concepts to produce, of final movies to distribute, of scripts, of personnel and so forth. The curator provides credible information that will aid in the consumption of symbolic products.

There are also economic functions related to identifying and certifying objective characteristics. For example, *Consumer Reports* tests and measures products based on performance and reliability and tries to

relieve the experience uncertainty involved with buying objectively-differentiated goods. Similarly, government agencies like restaurant boards or the FDA might certify that a product is produced safely. These are related to curation in that they are also intermediary functions that help to connect consumers with goods, but they are also fundamentally different because they are concerned with answering objectively knowable questions. A restaurant inspector can determine, at least in probabilistic terms, whether a kitchen is likely to poison its customers. They cannot certify whether food leaving that same facility will be delicious nor can they determine the needs that it will fulfill (if any).

A Sample of Curated Sectors

Curation is defined based on what it does and not on where it is in the economy. Virtually every sector has curation at some point in its production process[10], and in Chapter 3 we conduct an inventory of curation across multiple fields, using imprecise industry and occupational categories. Here, we review a set of sectors across which curation is most relevant.

Arts and Cultural Products are curated. The term "curation" is most associated with fine art and cultural artifacts. Originally, both in Roman and Medieval times, the curator was designated by the state or church to be a caretaker of some domain, a bit like how the modern American president designates "Czars". Its use to describe the selection and maintenance of cultural artifacts dates to Newtonian times when the likes of Robert Hooke — Curator of Experiments for the Royal Society — would assemble exhibits that purported to bring together 'one of everything'. So-called "Cabinets of Curiosities" were proto-museums with curators serving to acquire the materials. This was a role that survived into the age of the British Museum and other modern institutions (Belzer, 2014). However, putting a cultural artifact in a museum is only a very extreme way to designate it as valuable or special. There are many alternatives in cultural product markets, including reviews, awards, development contracts, invited exhibitions and much more. The centrality of curation in these domains is made very clear at year's end when critics and outlets release 'Best of' lists in their fields, in an act of what Caves (2000) calls certification. However, even this is an extreme example. Less obvious forms of curation are rife in arts and entertainment — for example when

[10] In this chapter, I will use examples of curation for final consumers alongside examples for intermediate producers.

creators are given development deals by corporations, or when distributors agree to distribute a product in a new market, or even when a restauranteur programs the day's playlist. Arts and cultural products are among the most curated products in the economy because final artistic outputs tend to combine multiple symbolically-differentiated inputs.

Wine is curated by reviewers and buyers and sommeliers based on the symbolic associations generated by its flavor. When a sommelier gushes about the apricot or ash notes in a wine, they are trading on the authority of a symbolic soothsayer, not a chemist. Wine has standardized physical dimensions (corks, bottles) which do not factor into curation and a high degree of curation at the wholesale and retail stages. The advent of online wine retailing has led to the dramatic expansion of selection for the average wine buyer (Durrieu, 2008) as well as new forms of automated recommendation (i.e., curation) to rival experts.

News is curated. The *New York Times* motto "All the news that's fit to print" is a clue—that is there is some judge deciding what among the many happenings of the world needs to be highlighted. This judge, who has invested reporting and editorial resources, will give you a highly limited window into the events and opinions of the day. The news that they provide will include only the details that they consider to be most important.

The transition of journalism to an online environment has only made curation more relevant, as the internet ecosystem allows for meta-editors to share the news that *they* believe is fit to print. The significance of independent aggregators like the *Huffington Post* and the *Drudge Report* suggests that there is value in this meta function. The Drudge Report exclusively aggregates news hyperlinks and is America's 71st most popular website, sending the New York Times 5.68% of all traffic. The New York Times website, which is the 57th most popular, only gets 50% of its traffic directly— the rest comes from curators of various forms (Similar Web, 2019).

Social Media Posts are curated, as is well illustrated by Twitter. Users compose 'tweets' to generate exposure and/or acclaim and/or validation[11]. Whether they get these things is determined in a market of consumers and other tweeters who validate other tweets with 'likes' and 're-tweets'. Whether a tweet is re-transmitted or endorsed will depend on how significant their tweet and potentially their avatar and bio is. Therefore, the value that an individual derives from the network is a function of a multitude of curatorial decisions made by others in the network. Twitter is a mostly open platform, with the norm being that tweets are public to strangers. This serves to dramatically increase the number of inputs into curation, and mechanically increase the amount of work that curators do. If one's social media feed consists of a quasi—fixed number of posts, then an increase in the number of tweets in the system will make curation more important. For most users, user-curation is not sufficient to sort the material that could be in their feed, and algorithmic curation must pick up the slack.

Venture Capital Firms are curated. Curation is the dominant tech financing system, which seeks to connect early-stage technologists with the investment they need to scale their firms. The terms of venture financing are less favorable to successful firms because they require that founders surrender equity. Businesses seeking venture capital investment accept these terms only because bank loans — which are usually only issue against objectively valuable collateral — are unavailable.

Venture investors inevitably place their bets while relying on speculative symbols like business plans and models and a sense of founder abilities. If a new firm is already able to demonstrate its success and scalability then it will be able to secure better financing outside of the venture system. The investors succeed only by picking winners before they start winning. Like entertainment production (Caves, 2000), venture financing has a high failure rate. Investors must be willing to absorb a high proportion of unsuccessful investment so that they gain equity in a hit or superstar firm.

[11] There is also a self-expression aspect to Twitter, but if users were only interested in that they would likely prefer more private formats. Twitter does not substitute for a personal diary.

Scholarly Knowledge, the set of scholarly discoveries and premonitions, or knowledge as produced by scholars, is curated. Regardless of their discipline, each scholar is unavoidably involved in symbolic judgement and choice. The body of academic knowledge is inherited from previous generations through oral and written knowledge, which represents a sample of knowledge that was represented in the previous generation. Which knowledge gets re-transmitted to future generations will depend on our own curatorial decisions. Dennett (1991:22) writes: "A scholar is just a library's way of making another library". In this sense, the scholar's work is entirely curatorial.

As more conventionally understood, the academic's work demands a great deal of curation activity. The literature review sections of academic papers require scholars to choose a sample of significant ideas from a larger population. Courses revolve around syllabuses which are supposed to represent the essential readings on a topic. Advising and collaboration activities are human resource activities, which I will describe as curatorial below. Every manner of academic promotion, from applying for grants to applying for tenure, involves making lists (literature, work, referees) of the most impressive items that have been culled from a wider list.

III How Do Curators Add Value?

Curators add value in the production and distribution of symbolic products by lowering uncertainty related to the valuation of symbolic characteristics. Generally, curators are of service in at least one of two ways:

Curation and Preference Formation (Choosing Products)

Symbolic products buyers are commonly put in the position of choosing between products that are differentiated on a symbolic basis. Table 3.1 shows some illustrative examples of products, their associated needs, and how curation might facilitate demand. For these examples, what makes a product ripe for curation is not its content but the basis on which it is chosen by its buyer — that is its symbolic differentiation. Bottled water is an apt example. It may contain one of the most essential elements in life, but it is not differentiated based on how well it does or does not hydrate. For that purpose, the bottle of Aquafina and the bottle of Fiji are equivalent (as is a bottle from tap). A successful brand will better

associate its product with the quenching of thirst. In the Fiji case, the producer does this by bottling water at the source of a distant waterfall and packaging it in a manner that makes this provenance obvious. There is also Aquafina, which is processed locally via reverse-osmosis and trades on a clean, simple visual brand, albeit one that is not as valuable to median consumers. Consumers are relatively passive in this market. They are not, as a group, willing to invest time to research available water brands and they are mostly happy to buy the water that they recognize (i.e., the water that has been advertised or endorsed) or the water that is available (i.e., the water that has been purchased by their retailer).

Table 3.1: Examples of Symbolically-differentiated Products

Product	Need	Basis of Differentiation	Types of Curation	Example Evaluative Statement
Bottled Water	Hydration, Convenience	Provenance, Packaging, Flavor	Advertisement, Peer Learning, Retailing, Celebrity Endorsement	"Fiji is a more refreshing water brand"
Modern Painting	Stimulation, Stored Value	Artistic Elements	Buyers, Critics, Awards, Schools	"Hockney's piece is more original"
Speculative Investment	Profit	Evaluative Model	Guides, Listing Service	"That company has more upside"
Television Advertisement	Profit	Strategic Differentiation	Human Resources, Schools, Advertisement	"That ad will drive more customers to our website"

Curation and Need Formation (Choosing Product Categories)

Upstream from the product choice decision there is a product category decision: the selection of which product (if any) will help the consumer fulfill a need, be that a need for hydration, social differentiation or something else. The curator is also helpful here. A bottled water ad may very well guide the consumer to the marketplace for water and away from the tap, or to the aisle with water bottles and away from the one with soft drinks and sports drinks. We can imagine a 'lifestyle influencer' who insists on drinking bottled water after their workouts and swears by its restorative effects. Brei's (2018) history of France's bottled water industry shows how more traditional advertising efforts contributed to the massive growth of the industry, as

the product at the center became associated with good health, gastronomical practice, motherhood and weight-loss. These demand-sided innovations surely exceeded any advances on the supply side; water may *be* water, but through curation it can come to represent many other desirable qualities.

Curation Among Three Products

Paintings, unlike water, are subject to more active and recognizable curation. They fulfill the basic but higher order physiological need for stimulation, and they are also prospective stores of value. Hedge funds buy modern art entirely for this latter reason (Campbell, 2008). Because the modern art piece is more expensive (and perhaps also because it takes up more space), more attention and budget are devoted to its curation. You do not pop into the gallery to pick up your next art piece in the same way that you would buy a bottle of water. Art curation takes the form of gallery and museum curation — specialized buyers are trusted by their clients to choose correctly. These curators in turn will trust 'judgement devices' (Karpik, 2010) like awards and degrees, as well as the informal evaluations of their own communities. Final consumers may themselves defer to these tools to guide their purchases.

The speculative investor, such as the investor in the early series of a venture capital fundraising round, is after hard profit not symbolic edification. They are unable to probabilistically determine which investments will offer them that. At an early enough stage, investments are governed by complete 'Knightian uncertainty' (Knight, 1921), and not risk. At this stage, equity does not represent a share of many hard assets. You do not buy a stake in a startup so that you can own a part of their office supplies — you are buying in to their potential which is a symbolic good. This at least is how the founder of Y-Combinator, Paul Graham, describes how to choose founders to invest in (2009). On the topic of how to spot potential, Graham says:

> What makes a good founder? If there were a word that meant the opposite of hapless, that would be the one. Bad founders seem hapless. They may be smart, or not, but somehow events overwhelm them and they get discouraged and give up. Good founders make things happen the way they want. Which is not to say they force things to happen in a predefined way. Good founders have a healthy respect for reality. But they are relentlessly resourceful. That's the closest I can get to the opposite of hapless. You want to fund people who are relentlessly resourceful.

In other words, there are no straightforward objective properties to guide angel investors and venture capitalists to the 'right' firms — or at least, if there were, they would eventually be discovered by the

market. At equilibrium, the speculative investor is a diviner of symbols. They are guided by curators such as investment guides, investors who signed on at earlier stages, or perhaps the seller (i.e., the retailer) for a particular investment. Just as a piece at Hauser and Wirth might be expected to be a sounder investment, an investment at Graham's Y-Combinator may be judged to have higher potential.

Another version of the symbolic product is the television advertisement. Once it has been released into the world, it may end up performing a curation function[12], but it is itself also curated. Before an ad makes it to television, it is processed through a system of curatorial filtering, from sketch to option to selected ad. And before an ad is even sketched, the advertising firm and the professionals working there are selected. Here, expert opinion — perhaps the advice of the firm — will bear the curatorial burden. Market research might be conducted to objectively determine which ad works — but it would be impossible to test every sketch in such a manner, let alone every advertising official who might have a hand in the ad's development. In the further upstream market for advertising professionals and advertising firms, prior curation by clients, awards juries, and schools is important.

What these curation examples commonly express is a sense that consumer demand is being readied for the market by the curator. Without the curator, the consumer would find themselves awash in products that they do not know how to sort. The curator's role is to get the consumer to point where choice is either just manageable enough (as might be the case with a consumer at an art gallery) or completely managed (as would be the case with a hedge fund that contracts buying out to a specialist).

The curator acts primarily as matchmaker between needs and preferences. The client wants to be hydrated/stimulated/renumerated, and the curator prepares some set of products that sate this need. In the extreme case, there will be only one product in the preference set. Here, the market for curation resembles a 'market for preferences', such that the consumer fully surrenders their consumer sovereignty (Earl and

[12] As we will see, advertisements can also be necessary in objectively differentiated markets.

Potts, 2004). More often, the consumer will retain some choice, albeit among a select (i.e., 'curated') set of options that is itself a simple model of the wider market.

IV Case Study: From Gutenberg Shock to Gutenberg Revolution

Occasionally changes in the production possibilities of variety will lead to sudden increases in variety at the market level, prompting new curation routines to develop. Chapter 2 argued that we are currently experiencing such an increase and that for new demand to accommodate new supply, consumers must acquire knowledge about how new goods will serve their needs. The curation function, as I have described it in this chapter, is a means through which knowledge about symbolically-differentiated products is transmitted and ultimately a mechanism for preference formation.

This section presents a case study of how a specific market absorbed a positive supply shock by developing new wants and needs and institutional curation arrangements. The setting is the British publishing industry between 1453 and 1800. This account suggests that the present digital variety shock has historic parallels and demonstrates how curation interacts with familiar economic processes such as specialization and economies of scale.

The Gutenberg Shock

A legendary symbolic supply shock arrived in Europe in around 1453 with the invention of the printing press. Among other things, this event revealed an immense appetite by Europe's readers for books. Only an estimated twenty million books had ever been printed before that point, but perhaps 200 million were printed between 1500 and 1600 (Headrick, 2009). In England, mechanical book printing did not begin until 1476, but grew thereafter by 2.6% a year between 1500 and 1650 (Broadberry et al. 2015: 154). The suite of book printing technologies (the printing press, copperplate engraving, typography, xylography), which followed the Gutenberg Bible, lower barriers to publishing ever more.

As of the mid-seventeenth century, 70% of English men and 90% of women were illiterate. Most books were consumed by clergy and (being pre-Reformation) were written in Latin (Deanesley, 1920). By

the end of the century, however, readership had grown significantly, and roughly 50 percent of the adult male population could read (Fox, 200: 19).

The 'Gutenberg shock' brought variety within and across literary categories. If you happened to know Latin, then you now had access to an immense number of titles across numerous genres. In England, this meant the ability to buy imported Latin books made in Italy and France, and vernacular selections from a growing stable of local presses (Feather, 2006). Those who had only been comfortable in the local vernacular could now participate in the print market. Entire new markets for books emerged, especially at universities and in cities.

Before print, it was more common for academic apprentices to learn at their master's feet and for the public at large to rely on rhyme to transmit and store knowledge (Eisenstein, 1980). Such transmission was more efficient than books, which had to be copied by hand by skilled scribes, one at a time. The new technology facilitated much more self-directed and independent study, as well as the ability to draw on many reference materials simultaneously (Eisenstein and Lewisohn, 2005). Such trends boosted demand. An engaged learner will sooner run out of material when they are not dependent on the spoken word. Thus, print rewired the needs that the book could serve. It was not only the "word of God" or the source of a good story or a reference, but an on-demand instructor.

Protestantism co-evolved with the written word. For new believers, the sense that the book itself was sanctified (i.e., in the Pope's language, in the official format) was lost, as was any pretension that the word of god needed to be mediated through the clergy. The press was also a means of reclaiming political autonomy from the church (Eisenstein and Lewisohn, 2005). Luther and Calvin were print entrepreneurs, who entered this newly opened religious market and competed vigorously with each other. For his part, Henry VIII commissioned anti-Lutheran screeds as pamphlets (Shaw, 2019). The entire extent of the protestant reformation in Europe was enabled by printing press technologies and a new market structure for the word of God (Rubin, 2014).

The sum of these changes meant a re-centering of knowledge transmission away from the central church and to university-based laymen. The ability to print illustrations was itself a boon to geography,

architecture, and the life sciences, which had previously been unable to transmit their most important texts (*ibid*). Universities consumed and produced; the first University Press was established at Cambridge in 1521.

Mass distribution of books meant a mass market. The median book buyer now belonged to a class of bourgeoise and middle-class readers, residing in cities (Dittmar, 2011; Scott, 2002). In terms of its demographics and its catalogue, the market for printed books was much more diverse than it had been for copied manuscripts.

The growth of the quantity and types of available books was clearly technology-led. Printing allowed for memory to be externalized (Mokyr, 2011, Donald, 1993) and therefore easier to access by learned consumers who hitherto had been outside the market. However, these changes are poorly described by the standard variety models. This was not the case of technology *just* accommodating extant preferences, but of technology re-defining needs for consumers (laymen/vernacular speakers) who had previously relied on more internalized knowledge.

Once their need for knowledge had been mapped on to books, demand for books accelerated as knowledge began to specialize into disciplines. New insights would arise to convene new fields and departments, and many of these were anchors for additional demand.

Branching and specialization of recreational reading developed at the same time. The period witnessed the rise of the fictional novel (Feather, 1988), of travelogues (Brennan, 2009) of children's books (Steinberg, 2017) and more. The demand for different kinds of books can also be understood as part of a desire for distinction. This is apparent in the 16th century development of bespoke typesetting and ornamentation for readers who demanded more individuated versions of books available on the mass market (Hellinga, 2008). These new forms of reading responded to entirely new needs—not just the need for salvation or education but amusement, indicating that that ensemble of needs that books met was diversifying.

An End to Book Scarcity

For our purposes, the most significant result of the Gutenberg Shock was an end to book scarcity. This is apparent in price data (Dittmar, 2011; Zanden, 2009; Clark, 2004) and probate inventories. Sear and Sneath (2020) note that the number of those listing books in their wills grew from 8 to 28% between the sixteenth and mid-seventeenth centuries, and fell back to 11% by the late 1700s, ostensibly because books were not valuable enough to list. The same basic relationship between reader and book exists in modern times: books are too useful to throw out but not too valuable to keep, so they end up piling up in giveaway boxes and 'little free libraries', unread but not entirely unwanted. This trend seems to have emerged well before the industrial revolution.

In this environment, something very close to the modern book industry was emerging. The print system replaced what had been more intimate patronage-based industrial organization. Because each copy had to be composed by hand, authors found themselves writing either for people they knew themselves, "their God" or wealthier patrons (Feather, 2006:20). Mechanized bookmaking meant that bookmakers could sell to customers abroad, and established the press, not a single rich reader, as the most important actor in the business. Presses would buy the manuscript 'copy' from the author, and with it the ability to reproduce it at will (Feather, 2019). The specialized publisher was more speculator than craftsman. They provided the investment for equipment and intellectual property and sub-contracted editing, production, and distribution to others (Steinberg, 2017).

In the language of this study, the new model meant the beginning of professional book curation, with the publisher assuming this central role. Publishers would buy manuscripts to print based on potential profitability and be rewarded with the opportunity to publish successful titles in perpetuity. The selection of possible manuscripts was vast — there were many living writers who would have happily accepted advances for manuscripts that they were otherwise incentivized to produce. It was now possible to become very rich in the book trade, and the number of people describing themselves as authors accelerated. Publishers also had their choice of books that had already been printed or scribed.

Thus, the market for books responded in two main ways so that it could absorb printed books. It learned to consume, acquiring wants and preferences for books to sate, and it also professionalized the curation function. The publisher, not the author or client, was now focal to production, and its central function was to choose books. Closer interrogation of the business of publishing reveals how curation itself came to be organized.

The Microeconomics of Publishing: Publishing as Risk Management

Book publishing had become a riskier endeavor in the print age. Under the scribal system scribes mostly worked on commission, only carrying inventories for school textbooks and references that enjoyed regular demand (Blayney, 2013). The new microeconomics were different. The fixed costs of printing (purchasing the manuscript, editing, typesetting) were such that the printer had to amass an inventory to have the opportunity to sell books, but there was no natural guarantee that the books would indeed sell. The Scottish publisher David Constable was just one cautionary tale: he and his investment partners were driven to bankruptcy by the publication of the *Encyclopedia Britannica* (Feather, 2006; 1988).

Despite these built-in risks, major publishers tended to survive. At the center of the industry was a small roster of 100 or so printers that thrived in the face of uncertainty. The inherent risks of choosing the right manuscripts were offset through a series of publisher adaptations that gave incumbents stable power in the marketplace.

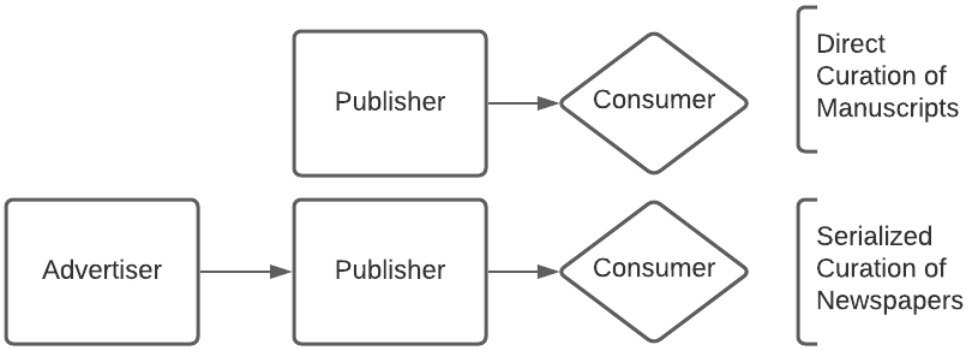
First, the publishing division of labor was becoming more specialized. Beginning in the 1520s, the publisher stopped being the manufacturer of the physical book and specialized instead in the coordination of printing, focusing on selection and manuscript preparation (Blayney, 2013). The more technical aspects of production such as binding and ink-making in formed their own fields by the end of the 16th century (Shaw, 2019). Book retailing was similarly spun off to "booksellers" who could take on publishing risk by buying wholesale orders. There also came to be specialization by content, with the publishers acquiring expertise and notoriety for certain markets, including the academic, ecclesiastical, and foreign. With subcontracting and content specialization, the publisher's curation function was expanding-- they now had to choose promising manuscripts and reliable partners. By the late 18th century, publishers were further

insulated by a layer of wholesalers (*ibid).* Such arrangements allowed firms to gain greater knowledge and labor efficiencies in what was one of the most technologically advanced fields of the time. Serialized curation structures of this sort are common today across other symbolic product fields, as Hirsch (2000, 1972) says. We will return to this in detail in Chapter 5.

Second, publishers began to diversify their risk portfolios through equity financing. As of the early 18th century it was possible for a publisher to buy a share — as small as 1/64th — of a printed copy (Feather, 2019). There was also "remaindering", an arrangement where unpopular texts were reissued at a discount. These arrangements allowed for presses to offload risk onto investors and retailers.

Third, risk management became embodied in the form of the printed word, as media with lower fixed costs developed. Less risky than buying, editing, and printing new manuscript editions was printing products that did not require substantial layout or translating. 'Ephemera' such as newspapers, magazines, pamphlets, and royal announcements became mainstays of the publishing business (Halasz, 2006). The newspaper industry expanded quickly over the seventeenth century (Feather, 2020). In manuscript publishing, the publisher assumes all upside and downside risk stemming from their choice of manuscript. With newspapers, the publisher allows for the advertising firm to program/curate a section of the printed work. This lower both the upside and downside risk for publishing. The curator covers at least some of their cost, but they also depreciate final product quality.

Figure 3.1: Broadsheet Publishing as Serialized Curation



The ephemeral form reflected a desire to save on paper, ink, and typesetting costs — font sizes were smaller, sheets were larger, cutting on processing costs per sheets (Shaw, 2014). The broadsheet — a large single sheet format which commonly held lyrics and speeches — was originally a testament to thrift.

Fourth, publishers embraced advertising as a source of fast and certain income. They contracted with other firms for promotion of mass products, often publishing standalone circulars and catalogs as advertisements. The pharmaceutical industry was an active advertiser. It used the printing system to advertise its medications because it offered national distribution. When acting as a printer of advertisements, the publisher eliminated their downside risk and (not by coincidence) almost eliminated their role as a curator. Publishers as printers need not deliberate over which advertisements to print. Instead, they can simply sell services to the highest bidder.

Finally, the book itself became an advertising medium: it advertised its press in its front matter, with title pages listing its (not the publisher or bookseller's) address, and colophons at the end, containing the equivalent of the modern "blurb" (Shaw, 2019, Steinberg, 2017).

Cartelization and Centralization

Publishing also became safer by dint of an industrial structure that concentrated the curation function, facilitating coordination among curators. The concentration of English and Welsh printing in the hands of a small number of mostly London-based companies acted to lower the endemic risks to publishing. As of 1622, there were only 22 presses, 20 of which were in London (Febvre and Martin, 1997). Such clustering had legal backstops as well. The Stationers Company was originally a guild whose members were recognized by the city of London as the only legitimate scribes. In 1557 the company received a royal charter giving them national dominion (Blayney, 2013) and the authority to enforce copyright[13]. In 1662 the Licensing of the Press Act, ensured that only printers authorized by the Stationers could legally operate, thereby giving London-based firms a de facto legal monopoly. However, a high degree of spatial

[13] This arrangement also permitted secondary markets for copyrights to emerge, allowing printers to buy or lease rights (Bhaskar, 2013).

concentration existed even before these acts, with almost all the national trade originating in London (Gadd, 2016) and with "spasmodic attempts" to form large presses in provincial towns failing (Shaw, 2019: 402).

The regulatory framework relaxed by 1695, and presses popped up in Birmingham, Bristol and lower tiered cities (Febvre and Martin, 1997), but the major presses remained in London, Cambridge and Oxford. Competition under a lighter regulatory regime mostly intensified among the London book publishers, and not between urban and provincial firms (Feather, 1988). London-based firms enjoyed unparalleled economies of scale. They shared in intellectual property rights, which were the focus of the regulatory regime after 1695, and they pursued joint production arrangements (McKittrick, 2002) that anticipated modern filmmaking. This quasi-collusive arrangement only intensified with the 'Conger System' that took off around 1679. This was an exclusive wholesale arrangement between booksellers and London printing houses which ensured that books were only purveyed by a select number of sellers. It worked to combat piracy (Feather, 1988), but also, surely, as a 'conspiracy against the public' from a pricing perspective.

Most significantly, the London firms tended to be the central hubs of national distribution networks: booksellers, papermakers, binders, sales syndicates that ensured that virtually any book printed in London was available countrywide (Feather, 1988). By this point, there was printing capacity in even smaller English cities (Febvre and Martin, 1997), but these local presses mostly produced periodicals (often with copy from the city), not major volumes. Additionally, the same networks that distributed local news would distribute books made in the city — through contracted agents and salespeople — and the London presses would buy space in the local papers to advertise and promote their products. This situation certainly has echoes in the modern period, where anyone can write a book using the latest software, but only major authors can access the main distribution system for books.

Notably, command and control of English publishing was even concentrated within London on the legendary Fleet Street. Wynkyn de Worde, William Caxton's successor, was responsible for moving the Westminster operation to Fleet Street. He was soon joined there by dozens of Stationers (Blayney, 2003)

and successive generations of publishing workers. The district remained the symbolic home of the industry until well into the twentieth century (Steinberg, 2017).

Why was London so important in the early years of the print trade? Why was it the place where successful presses happened to form in the early days of print? The historical consensus seems to be that financial centers generally enjoyed advantages because of their proximity to investors and capital. So, mercantile Venice was a major exporter of early Latin prints, producing a quarter of all of Italy's printed books in the 17th century (Van Vliet, 2019), Paris dominated the northern French trade, and Lyons the southern one (Febvre and Martin, 1997), and the book trade in the 'Low Countries' was based in Amsterdam and Antwerp (Steinberg, 2017).

Industry and geographic consolidation can be explained as a response to local external and pecuniary economies of scale. The great English printers shared, matched, and learned (Duranton and Puga, 2003), churning home market effects for their workers (Krugman, 1991). A version of this argument is that concentration lowered curation risks. Fewer publishing firms meant more control over the range of products available at market, and co-financing/co-publishing arrangements only reinforced this. The downside of choosing 'wrong' is reduced when you can be sure that your competitors are choosing like you. We will return to this idea in Chapter 5 when we discuss 'Ouija Effects' in curation.

At the end of our story, we are left with the strong impression that the 'Gutenberg Shock' was not by itself responsible for the massive growth of the market for English books in the 18th century. A 'Gutenberg Revolution' depended on technology and on processes on the demand side (learning to consume) and the emergence of curation as a professional field. The book publisher, a wholly new creature, came to orchestrate supply and demand in this new market, in part by choosing which manuscripts to publish. In Chapter 6 we will see that the modern music industry has much in common with Renaissance printing. There, new intermediaries like streaming platforms, music blogs and music festivals emerge in response to a new glut of music acts.

V Conclusion

In the more symbolically differentiated areas of the economy, the faster or larger or greener product will not necessarily be more valuable, especially over time. Curators support the functioning of these markets by making the amount of symbolic choice manageable or by making direct buying decisions.

This chapter has briefly reviewed the function and locations of curation in the economy and illustrated their emergence in the pre-industrial print industry. This has allowed us to tell a more realistic story about how symbolic products markets manage to become more variegated. We saw that the big innovation of the printing press acted to reduce the marginal costs of books and catalyze the development of other types of text, but also that the printing press did not spontaneously or entirely lead to demand for many more books.

The ability to circulate many more manuscripts would have been trivial had the book market not learned to demand more and more kinds of books. The market for printed words grew in part because the printing press allowed the book market to jump the 'Latin barrier'. It also allowed for books to be associated with secular needs like evangelizing and training.

More relevant to the present study is that the proliferation of printable manuscripts would not have led to an expansion of book variety without a fundamental reorganization of bookmaking. The choosers of manuscripts, who over time would specialize in that exact function, became the focal point of the new system. The presses would select manuscripts to publish, assemble funding, and contract out sales and manufacturing. They developed practices including content specialization, efficient and cheap publication formats, and advertising, which acted to lower risk. They benefitted from anti-competitive legal regulations during some period, but their tendency to concentrate in space was a more constant source of stability. Through concentration they were able to specialize, cooperate, and herd around certain symbolic choices. In Chapter 5 we will attempt to model this process in more detail. First, we will see how widespread curation and symbolic differentiation is in the modern economy.

Chapter 4 Surveying Curation in the US Economy

I Using Workforce Data to Study Curation

We have come to see through suggestive examples that curation is important for the functioning of a wide range of activities — activities which may seem far removed from the world of artifacts and museums that curation is commonly associated with. Additionally, we now understand curation as an organizational response to exogeneous increases in symbolic variety, such as the Gutenberg shock or the ongoing digital revolution. Here, we come to appreciate how important curation is in the context of the wider economy. To what extent do the latent demands of symbolic products and the ongoing demands to remove excess variety from the market lead to employment in curating fields?

This chapter surveys an entire advanced economy, the US economy, for evidence of curation. It establishes that curation is a significant and likely growing sector of the economy. Florida (2012) estimates that 1 out of every 3 jobs in the US are 'creative'. Others establish different estimates using separate assumptions about who does creative work and how doctors and lawyers should be treated in the analysis (Markusen, 2008; McGranahan and Wojan, 2007). Despite some methodological contrasts, there does seem to be a widespread if not unanimous feeling that the size of the creative economy should be benchmarked and can be measured with industrial and occupational data sources (see Potts et al., 2008 for a critique of this approach).

Such estimates are of interest to regional economic development planners who would seek to change the composition of the local labor force, as well as to economic geographers and economists who study regional economic structure. They are not appropriate estimates of how much curating work exists in the economy because many 'creative' workers (e.g., engineers) are not involved in curation at all and many non-creative workers (e.g., florists) are.

This chapter benchmarks the importance of curation in the US economy using both industry and occupational analyses. Section II establishes the number of products that are symbolically differentiated. The goal here is to establish the scope of economic activity to which curation is relevant. Section III turns to estimates of curation as an activity by using occupational data to estimate the number of curating workers in the labor force. The difference between these analyses can be illustrated with the example of an industry

like “Amusement and Theme Parks”. The sector encompassing “The Happiest Place on Earth” is more symbolically-differentiated and designated as such in the industry analysis, but it mostly employs frontline workers like ride operators who do not perform symbolic choice; in occupational terms it is not especially curatorial. Section IV reflects on the limitations of studying these issues with government workforce data. The chapter concludes that curation is a significant and growing activity within the economy that does seem to agglomerate at a relatively high level, but that further analysis is needed to achieve more than a cursory understanding of its size.

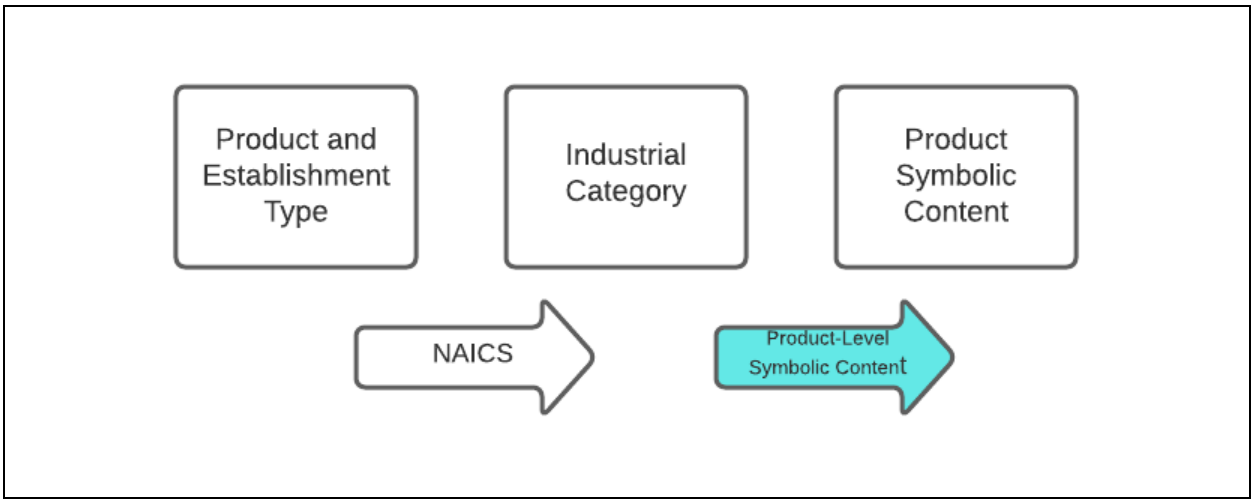
II Estimating the Size of the Symbolic Economy: An Industry Analysis

We begin by considering the size of the universe of symbolically-differentiated products. This is the area of the economy that curation decisions affect. The division of labor for symbolic production will involve many non-curating, non-creative workers. A newspaper delivery operation is engaged in the symbolic economy, even though the nature of its work has no bearing on curation or symbolic production. Its long-term success relies on (in addition to technological forces) the curatorial performance of editors and journalists and reviewers working for the papers that it delivers. Alternately, the CEO of a chemical processing firm is certainly performing symbolic work in their job in the service of a non-symbolic product that will eventually be valued by what it objectively does and not what it means. Here, I am interested in how much of the economy is engaged in producing symbolic products.

Calculating the Symbolic Content of Industries

Information on employment activity by industry type is reported using North American Industrial Classification System (NAICS) data that is collected by the US Census Bureau in its *County Business Patterns*. The firm is the molar unit of analysis under NAICS. Firms are sorted into an industry based on the type of work they do and the type of product they produce. To estimate the size of the symbolic economy, NAICS industries are coded at high resolution (i.e., 4 and 5 digits) into product categories based on the symbolic nature of underlying products (as opposed to establishment type). Figure 4.1 maps this coding approach.

Figure 4.1 Classifying Industries by Product Type



We can illustrate the present approach using wine as an example. There are three industry categories that describe work with wine: Vineyards (NAICS 312130), Wine and Distilled Alcohol Wholesalers (42482), and Beer, Wine, and Liquor Stores (44531)[14]. In the symbolic content typology, all three are coded similarly even though the nature of the work by their establishments is quite different. The division of labor between manufacturers and wholesalers and retailers is merely a way to achieve economies of scale in the production of the same product — a product which has a high degree of symbolic differentiation. That product itself is what we are interested in in this study.

There are three limitations to inferring product characteristics from NAICS industry titles. First, industry categories do not actually exist in the economy (Potts al. 2008), so treating them as the basis for other categories requires reifying them.

Second, products themselves are more or less symbolic depending on their vertical differentiation within an industry. Beckert (2020) also makes this point. Many products are like blue jeans. At the low-cost end of the jeans market, the average consumer will likely not pay attention to who designed the jeans, where

[14] We continue to refer to operations farther away from the final consumer as upstream, and operations near the final consumer as downstream.

they came from or even what style they come in. What is important is that they fit and perform basic functions (warmth, storage) adequately. At some no-frills second-hand stores, you pay for jeans by the pound.

Near the top of the jeans market there are "designer jeans", a subcategory that only dates to the 1970s (Smith, 1995), and at the top of the jeans market there are collectors who do not ever remove jeans from their packages. The collector market is driven entirely by aesthetics and scarcity. Jeans as a category defy the key conceptual distinction that this study is focused on.

The third limitation is related to industrial aggregation. Even if jeans were easily classifiable in terms of symbolic content, it would still be difficult to estimate how much production was like the production of jeans because jean making is thrown into the same NAICS category with other goods. The NAICS category containing the manufacture of men's jeans is "315211 Men's and Boys' Cut and Sew Apparel Contractors", an industry group that includes more categorically symbolic products such as baseball caps and neckpieces and much more objective ones such as coat linings.

These ambiguities could theoretically be avoided by developing a separate product-level classification system that reliably sorted products into establishments based on their nature of differentiation. This would require extensive expertise on industrial organization, and calibration of the new instruments — tasks that would not be feasible in a dissertation-type project. In the face of the ambiguities listed above, it is necessary to account for the NAICS categories that cannot be easily categorized using the NAICS (or any) industrial system. I call industries that represent products with a wide range of symbolic content "Mixed". These contain some undefined mix of more and less symbolic products. Mixed products are not suited to the present estimates but contain, at the industry level at least, some symbolically-differentiated products.

Appendix 3.1 lists the wide array of industries that we can consider Mixed. Two industry categories at the macro, 2-digit NAICS are included, indicating that every sub industry in these areas is mixed. In the first of these, agricultural commodities, are inputs into both basic staple goods ('beefsteak' tomatoes, 'good ordinary cotton') and artisanal goods ('heirloom', 'Egyptian'). The high price points for the latter reflect

valorized symbolic characteristics. Construction is the second Mixed macro category. The construction of military barracks and corporate headquarters fall into the same industry category, even though the latter is more symbolically-intensive. Services (funeral, dental, water transportation) can come in more or less symbolic forms. There is no way to differentiate these at the industry level. Downstream from the farm at the restaurant we find more and less symbolic versions. There are 'roach coach' food trucks that seek only to give clients better access to food while they are at a worksite, and gourmet food trucks that are experimenting with that form.

Not all industry categories are so stubborn. Mined commodities and utilities are two categories of products that are categorically non-symbolic at the industry level. We can say that these have **"Negligible"** symbolic content. These are assumed to not require symbolic judgement to be valued. Appendix 3.2 lists the industry categories at the 3 and 4-digit levels that are so coded. Mostly, these are upstream input manufacturing (chemicals, metals, plastics etc.) and the manufacture of industrial machines and tools. At the retail end there is transportation and delivery, including airport operations (not airport services) and couriering/ local transit. When these sectors are even quasi-competitive — public transit, airports, and marinas don't fit this condition — their speed and (vertically differentiated) service levels dictate which products will be favored. Maintenance services are valuable insofar as they keep buildings in a definable physical condition. Knowledge services can be negligibly symbolic. Engineering and testing require faithful and reliable understanding of physical properties and not symbolic interpretation.

On the other side of the symbolic/objective continuum are what I call "**Overwhelmingly**" symbolic products (Table 4.1) — overwhelming because, per the discussion in Chapter 2, their consumers are confronted with the choice between products that are objectively similar or identical, and asked to make purchasing decisions on mostly symbolic grounds. These most closely match, and in some cases include, the product examples that have been used in prior chapters.

Advertising involves the manipulation of words and images to sell products and is an obvious case. Libraries and archives are to be evaluated almost entirely based on the size and scope of their collections

and the services they provide in connecting clients to the same. This is different than in education, where objective performance and compliance to a curriculum are key factors differentiating good and bad schools.

Table 4.1 Industries with Overwhelming Symbolic Content and Underlying Products

Industry	Product Type	Industry	Product Type
Sign Manufacturing	Advertising	Book, Periodical, and Newspaper Merchant Wholesalers	Entertainment
Advertising Agencies	Advertising	Book Stores and News Dealers	Entertainment
Advertising Material Distribution Services	Advertising	Musical Instrument and Supplies Stores	Entertainment
Direct Mail Advertising	Advertising	Art Dealers	Entertainment
Media Buying Agencies	Advertising	Book Publishers	Entertainment
Media Representatives	Advertising	Motion Picture and Video Distribution	Entertainment
Outdoor Advertising	Advertising	Motion Picture and Video Exhibition	Entertainment
Directory and Mailing List Publishers	Advertising	Motion Picture and Video Production	Entertainment
Convention and Trade Show Organizers	Advertising	Music Publishers	Entertainment
Wineries	Alcohol and Tobacco	Record Production and Distribution	Entertainment
Libraries and Archives	Education	Sound Recording Studios	Entertainment
Miscellaneous Intermediation	Financial Strategy	Cable and Other Subscription Programming	Entertainment
Portfolio Management	Financial Strategy	Radio and Television Broadcasting	Entertainment
Management Consulting Services	Firm Strategy	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	Entertainment
Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	Flowers	Dance Companies	Entertainment
Florists	Flowers	Independent Artists, Writers, and Performers	Entertainment
Hair, Nail, and Skin Care Services	Personal Display	Musical Groups and Artists	Entertainment
Employment Placement Agencies and Executive Search Services	Human Resources	Other Performing Arts Companies	Entertainment
Temporary Help Services	Human Resources	Promoters of Performing Arts, Sports, and Similar Events with Facilities	Entertainment
Document Preparation Services	Human Resources	Promoters of Performing Arts, Sports, and Similar Events without Facilities	Entertainment
Jewelry and Silverware Manufacturing	Personal Display	Theater Companies and Dinner Theaters	Entertainment
Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	Personal Display	Civic and Social Organizations	Social Capital
Jewelry Stores	Personal Display	Grantmaking and Giving Services	Social Capital
Cosmetics, Beauty Supplies, and Perfume Stores	Personal Display	Religious Organizations	Social Capital
Newspaper Publishers	Journalism	Social Advocacy Organizations	Social Capital
Periodical Publishers	Journalism	Museums, Historical Sites, and Similar Institutions	Social Capital
Internet Publishing and Broadcasting and Web Search Portals	Journalism	Political Organizations	Social Capital
News Syndicates	Journalism	Photographic Services	Symbolic Formats
Broadcasting (except Internet)	Journalism	Graphic Design Services	Symbolic Formats
Investment Advice	Investment	Interior Design Services	Symbolic Formats
Investment Banking and Securities Dealing	Investment	Scenic and Sightseeing Transportation, Land	Travel
Securities and Commodity Exchanges	Investment	Scenic and Sightseeing Transportation, Water	Travel
Securities Brokerage	Investment	Tour Operators	Travel
Open-End Investment Funds	Investment	Travel Agencies	Travel
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	Investment	Doll, Toy, and Game Manufacturing	Pastimes
Monetary Authorities-Central Bank	Investment	Hobby, Toy, and Game Stores	Pastimes
Commodity Contracts Brokerage	Investment	Public Relations Agencies	Public Relations

Investment and financial strategy require clients to pick the investment and savings options that represent the highest return. Their basis of differentiation is the appearance of authority in matters that are unknowable. Journalism and entertainment maintain striking conformity on objective grounds and compete by appealing to the client's sense of what is enjoyable or important. What might be called Social Capital Services (Putnam, 2000) are those that compete by appealing to a sense of right and wrong, group affiliation or both. Social capital is a status of belonging and, whatever its charms, is not a physical commodity to be spread around.

Human resource functions can be overwhelmingly symbolic. Hiring, firing, compensating, and training require some degree of symbolic judgement, because they require that the hirer project the qualities of workers that they can only evaluate today via symbolic cues far into future. There are objective and semi-objective inputs into the curation decisions, credentialization being one, tenure being another, fluency in a language being still another — but none of these features will determine the future success, or failure, of a job candidate. Moreover, there is a fundamental ambiguity surrounding how different combinations of these attributes should be weighed against each other. Karpik (2011) calls this "multidimensionality". Most of all, many of the 'facts" that inform hiring decisions are in fact symbols — for example, where each candidate went to school. While there are prominent examples of 'very stable geniuses' who went to Wharton, some less talented and less capable admits might have ended up there or failed to develop as soon as they were admitted.

In general, there will be less uncertainty in hiring less skilled positions. The relevant skills of movers and pickers might be verified by visual inspection. However, even in this case there are a series of relevant 'soft skills' (reliability, trustworthiness) that must be guessed at. Hirers invest in curatorial services like recruiting and job boards as a way of increasing their certainty over these fundamentally uncertain transactions. The social network is often preferred as a recruiting channel, in part to manage uncertainty (Granovetter, 1995). In this case, the primary contact becomes a curator for job candidates in their network.

The final category contains industries with products having "Preponderant" symbolic content. These have some degree of objective or performance-based differentiation among competitors but are still mostly distinguished by what they represent.

Table 4.2 Industries with Preponderant Symbolic Content and Underlying Products

Industry	Product Type	Industry	Product Type
Wine and Distilled Alcoholic Beverage Merchant Wholesalers	Commercial Beverages	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	Professional Services
Beer, Wine, and Liquor Stores	Commercial Beverages	Environmental Consulting Services	Professional Services
Breweries	Commercial Beverages	Industrial Design Services	Professional Services
Distilleries	Commercial Beverages	Landscape Architectural Services	Professional Services
Bottled Water Manufacturing	Commercial Beverages	Marketing Research and Public Opinion Polling	Professional Services
Soft Drink Manufacturing	Commercial Beverages	Offices of Lawyers	Professional Services
Beer and Ale Merchant Wholesalers	Commercial Beverages	Family Planning Centers	Professional Services
Confectionery Merchant Wholesalers	Commercial Sweets	Offices of Chiropractors	Professional Services
Tobacco Manufacturing	Commercial Tobacco	Offices of Dentists	Professional Services
Paint and Wallpaper Stores	Display Goods	Offices of Mental Health Practitioners (except Physicians)	Professional Services
Gift, Novelty, and Souvenir Stores	Display Goods	Offices of Optometrists	Professional Services
Photofinishing	Display Goods	Offices of Physical, Occupational and Speech Therapists, and Audiologists	Professional Services
Ornamental and Architectural Metal Products Manufacturing	Symbolic Inputs	Offices of Physicians	Professional Services
Paint, Varnish, and Supplies Merchant Wholesalers	Symbolic Inputs	Outpatient Mental Health and Substance Abuse Centers	Professional Services
Software Publishers	Information Technology	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	Professional Services
Satellite Telecommunications	Information Technology	Nursing Care Facilities (Skilled Nursing Facilities)	Professional Services
Mortgage and Nonmortgage Loan Brokers	Financing	Residential Intellectual and Developmental Disability Facilities	Professional Services
Sales Financing	Financing	Residential Mental Health and Substance Abuse Facilities	Professional Services
Business and Secretarial Schools	Education	Spectator Sports	Professional Services
Colleges, Universities, and Professional Schools	Education	Caterers	Professional Services
Computer Training	Education	Drinking Places (Alcoholic Beverages)	Professional Services
Fine Arts Schools	Education	Food Service Contractors	Professional Services
Language Schools	Education	Mobile Food Services	Professional Services
Professional and Management Development Training	Education	Cemeteries and Crematories	Professional Services
Sports and Recreation Instruction	Education	Management of Companies and Enterprises	Professional Services
Child and Youth Services	Education	Hospitals	Professional Services
Child Day Care Services	Education	Lessors of Residential Buildings and Dwellings	Real Estate
Direct Insurance (except Life, Health, and Medical) Carriers	Insurance	Offices of Real Estate Agents and Brokers	Real Estate
Direct Life, Health, and Medical Insurance Carriers	Insurance	Offices of Real Estate Appraisers	Real Estate
Insurance Agencies and Brokerages	Insurance	Real Estate Property Managers	Real Estate
Sporting and Athletic Goods Manufacturing	Recreational Tools	Construction, Transportation, Mining, and Forestry Machinery and Equipment Rental and Leasing	Real Estate
Casinos (except Casino Hotels)	Recreational Venues	Hotels (except Casino Hotels) and Motels	Real Estate
Fitness and Recreational Sports Centers	Recreational Venues	Luggage and Leather Goods Stores	Luxury Goods
Golf Courses and Country Clubs	Recreational Venues	Nonscheduled Air Transportation	Luxury Travel
Other Gambling Industries	Recreational Venues	Limousine Service	Luxury Travel
Skiing Facilities	Recreational Venues		
Casino Hotels	Recreational Venues		

Travel services trade on the idea that some parts of the world are worth seeing. The travel experience that is assembled is somehow better than one that might have been assembled because it is more interesting or significant.

The aggregation problem reappears in this category. The Industry "Beer, Wine and Liquor Stores" includes wine, which is overwhelmingly symbolically-differentiated even at the low end of the market, but

also beer[15] and spirits — domains that (despite recent developments) tends to revolve around mass produced brands and thus come with a lower level of choice. Cigarettes, soft drinks, candies, bottled water, and margarine are similar. They are mostly differentiated by their (symbolic) flavor, but barriers to entry are such that variety is minimal (i.e., processing uncertainty is not relevant in the middle of this market). In cases where "Preponderant" and "Overwhelming" products appear to be grouped at the industry level, I have coded the industry as "Preponderant".

Display goods like paint, wallpaper and photographs are symbolic in nature, but also have stronger objective differentiation (e.g., dimension, processing technique) than the uniform format entertainment goods in Table 4.2. Inputs into symbolic production like paint are obviously symbolic themselves, but they also tend to be sold by quantity like commodities — paint is bought by the gallon and wallpaper by the yard. The final products that these help to form are more symbolically-differentiated.

Financing and insurance underwriting are financial transactions that can be conducted via actuarial tables. Each firm will have its own system based on a quasi-objective understanding of what is stable, but the reasoning behind their systems will be similar. At the market level, insurance companies use symbols to draw contrasts. One prominent insurance company has a duck for a mascot, another is represented by Abraham Lincoln. The symbol, then, becomes the prime mode of product differentiation.

Instruction is included in this category because the determination of what constitutes a valuable school will be partially algorithmic and partially symbolic. Low teacher student ratios and adherence to curricula are important, but so is school reputation and teacher pedigree. Alma maters matter for schools, not drycleaners or the services listed in Appendix 3.1. The same mix is evident among recreational venues. Bowling alleys will be differentiated by their technology and their cleanliness.

Professional services require their practitioners to be proficient. They are categorically subject to evaluation based on objective performance (for example, is a patient's health improved or maintained, or does a client stay on the right side of the law?). They also require the projection of proficiency. Bedside

[15] The interminable low calorie beer war between "Bud Lite" and "Miller Lite", for example, has seen no peace in my lifetime. And yet even after viewing hours of commercials I cannot describe the difference between these products.

manner is important on the market. Karpik (2010) points out that the market for tutors is substantially a market for "Miracle Workers" — that is, workers who appear to treat the job as a calling. Guevarra (2010) describes a kind of provenance premium for nursing workers from the Philippines who are problematically perceived as natural caregivers. Real estate services require providers who know how to conduct real estate transactions and present properties in the best possible light.

A final category is reserved for **"Residual"** industries. These categories contain establishments that census officials themselves cannot sort into the established taxonomy. They are the 'Industries of X that are not otherwise classified'. All NAICS codes ending in a 9 are residual categories. I take a conservative approach to coding residuals. When a 4- or 5-digit industry belongs to a higher industry that belongs entirely to a symbolic category, then the residual category is so coded. In all other cases it is coded as residual.

Employee and Wage Counts

Having developed a typology, we can now gauge the importance of symbolically-differentiated goods by counting employment and wages in each type of sector. Table 3.3 shows how much employment in major industry categories (2-Digit NAICS) is in sub-industries that are designated as "Overwhelming", "Preponderant", "Mixed" or "Residual".

A full 45% of total employment is in the troublesome Mixed category, almost one out of every 4 jobs are attached to somewhat symbolic categories, 14% are attached to Negligible categories, and 11% belong to Overwhelmingly symbolic ones. At the major industry level, knowledge—related services, or what might be called elsewhere "Creative Industries" (Jones et al. 2015) are near the top in terms of Overwhelming industry content.

Table 4.3 Distribution of Detailed Industry Employment Across Major NAICS Categories, By Product Type (5-Part Schema)

Industry	Overwhelming	Preponderant	Negligible	Mixed	Residual
Administrative and Support and Waste Management and Remediation Services	57%	0%	15%	24%	4%
Other Services (except Public Administration)	53%	5%	11%	19%	12%
Information	37%	18%	14%	28%	3%
Professional, Scientific, and Technical Services	27%	27%	12%	29%	5%
Arts, Entertainment, and Recreation	25%	57%	1%	9%	7%
Finance and Insurance	14%	37%	0%	34%	16%
Economy as a Whole	**11%**	**23%**	**14%**	**45%**	**6%**
Retail Trade	3%	2%	0%	89%	6%
Wholesale Trade	2%	5%	29%	47%	17%
Real Estate and Rental and Leasing	2%	64%	10%	10%	14%
Educational Services	1%	58%	0%	36%	5%
Manufacturing	1%	3%	44%	38%	14%
Transportation and Warehousing	0%	1%	86%	8%	4%
Accommodation and Food Services	0%	23%	0%	77%	0%
Agriculture, Forestry, Fishing and Hunting	0%	0%	0%	100%	0%
Construction	0%	0%	0%	100%	0%
Health Care and Social Assistance	0%	57%	2%	35%	6%
Mining, Quarrying, and Oil and Gas Extraction	0%	0%	100%	0%	0%
Utilities	0%	0%	100%	0%	0%
Management of Companies and Enterprises	0%	100%	0%	0%	0%

The industry groups at the top of the table would not headline any list of creative industries. The "Administrative and Support and Waste Management category" includes establishments devoted to employment placement and executive search, as well as travel and tourism and garbage collection. "Other Services" is largely composed of social capital organizations as well as Hair and Makeup and Photofinishing. Manufacturing is not mostly Mixed or Negligible. Agriculture is entirely Mixed, not Negligible.

The differentiation between Preponderant and Overwhelming industries is the aspect of the 5-part schema that inspires the least confidence. Border cases have been assigned to the Preponderant category but without product-level information we cannot be sure that this strategy is most accurate. The top category is reserved for industries that we can be sure are symbolically-differentiated.

In case the 5-part schema appears more precise than it is, estimates are recalculated with a 3—part schema, in which one category is simply Symbolic, another is Negligible and the industry categories that can't be easily coded are Residual. The Results are shown in Table 4.4.

Table 4.4 Distribution of Detailed Industry Employment Across Major NAICS Categories, By Product Type (3-Part Schema)

Industry Group	Symbolic	Negligible	Residual
Management of Companies and Enterprises	100%	0%	0%
Arts, Entertainment, and Recreation	83%	1%	16%
Real Estate and Rental and Leasing	66%	10%	25%
Educational Services	59%	0%	41%
Other Services (except Public Administration)	58%	11%	31%
Health Care and Social Assistance	57%	2%	41%
Administrative and Support and Waste Management and Remediation Services	57%	16%	28%
Information	55%	42%	3%
Professional, Scientific, and Technical Services	53%	12%	34%
Finance and Insurance	51%	0%	49%
Whole Economy	*35%*	*15%*	*50%*
Accommodation and Food Services	23%	0%	77%
Wholesale Trade	7%	31%	62%
Retail Trade	5%	5%	91%
Manufacturing	5%	44%	52%
Transportation and Warehousing	1%	86%	13%
Agriculture, Forestry, Fishing and Hunting	0%	0%	100%
Construction	0%	0%	100%
Mining, Quarrying, and Oil and Gas Extraction	0%	100%	0%
Utilities	0%	100%	0%

This analysis permits a few topline findings. Among the industries that can be easily classified, there is a 2 to 1 ratio between jobs in the symbolic and jobs in the performance-based economy. At least 35% and up to 85% of jobs in the economy are in symbolic industries. Finally, the view of how 'creative' the economy is differs at the product level compared to the industry level. Management of companies is a preponderantly symbolic service, while Arts, Education and Professional services are overwhelmingly so. Information and Professional Services are not as reliably devoted to symbolic products.

We get a more detailed look at the size of symbolic industries in Table 4.5. As of 2017 there are more than 16 million workers in Overwhelming industries, earning $1 Trillion in wages, and an additional 33 million in Preponderant industries, earning $2 Trillion, compared to 20 million workers in Negligible industries, earning $1.2 Trillion. The average annual earnings in the three codable sectors is about comparable, and significantly higher than in either of the residual sectors.

Table 4.5 Distribution of Economic Activity by Industry Type, 2017 and 1998

	Industry Category	Employment	Share	Wages (000s)	Share	Average Earnings
2017	Overwhelming	16,403,297	11.3%	1,050,893,298	13.4%	$64,066
	Preponderant	33,852,376	23.3%	2,123,451,360	27.0%	$62,727
	Negligible	20,082,292	13.8%	1,271,466,203	16.2%	$63,313
	Mixed	65,577,751	45.2%	2,912,504,026	37.1%	$44,413
	Residual Category	9,255,627	6.4%	502,122,780	6.4%	$54,251
	Whole Economy	145,171,343		7,860,437,667		$54,146
1998	Overwhelming	10,633,839	11.2%	325,950,255	11.2%	$30,652
	Preponderant	25,569,944	27.0%	877,367,991	30.1%	$34,312
	Negligible	15,794,279	16.7%	560,904,231	19.3%	$35,513
	Mixed	35,520,421	37.5%	936,486,877	32.2%	$26,365
	Residual Category	7,144,860	7.5%	209,669,144	7.2%	$29,345
	Whole Economy	94,663,343		2,910,378,498		$30,745

Comparable industry data is available dating back to 1998. Since then, the relative employment share for Overwhelming jobs remained the same, but the wage share has grown by more than 2 percentage points. The wage and employment share for Preponderant and Negligible industries has declined noticeably. Mixed employment share has grown, with wage share growing somewhat less. The rise of creative industries that is documented elsewhere does not seem to extend as much to the product level. The symbolic share of economic activity has been somewhat stable over the last 20 years.

III The Curating Workforce: An Occupational Analysis

As we have seen, curation is concentrated within establishments at the employee-level. If a small independent record company has 20 employees some of these will be specialized in physical production,

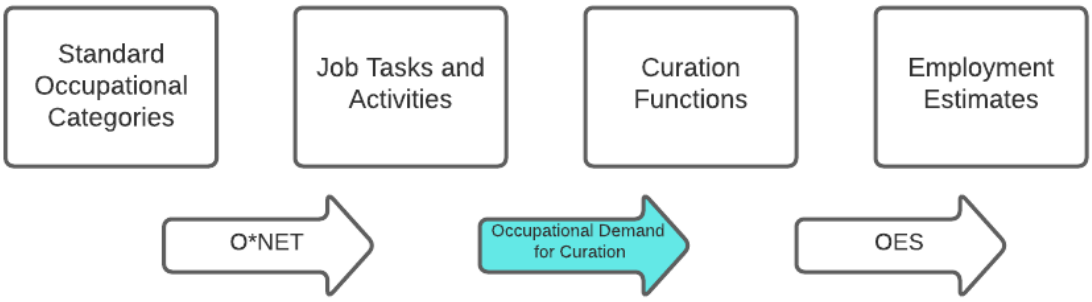
some in administrative support, some in IT — including electronic distribution — and still some more in curation functions like scouting talent, structuring deals (i.e. valuing talent), assessing distribution channels (i.e. downstream curation), brokering co-production, and more. The main goal of this analysis is to identify the number of workers doing the latter type of activities.

Identifying Curating Occupations

Occupation-level statistics are the best guide to how different kinds of functions are divided among different kinds of workers. Relevant US data comes from two Department of Labor sources: O*NET and Occupational Employment Statistics (OES). O*NET, formerly the Dictionary of Occupational Titles, is a database with detailed occupation definitions for some 1,000 occupational categories that is intended to serve as a resource for job seekers. It is most useful for researchers because it codes each job along 18 dimensions, including Tasks, Knowledge, Abilities, Skills and Work Context. OES provides the definitive estimate of employment and wages for occupational groups.

Here, O*NET descriptions and data on job "Tasks" and "Activities" are used to code some 970 detailed occupations into a simple 3-part professional curation typology that seeks to capture whether represented workers make or facilitate symbolic choices on behalf of downstream clients. OES statistics are used for roughly the same set of jobs to calculate the size of the curation workforce in terms of both employment and wages.

Figure 4.2 Generating Curation Occupation Estimates



The typology is described in detail here. Occupations that clearly or mostly do not perform these functions are sorted into a **"Non-Curator"** category. This includes "Heavy and Tractor-Trailer Truck

Drivers", "Receptionists and Information Clerks", and "Police Patrol Officers". It also includes professionals who might be expected to perform curation functions but whose 'marginal product' at the category level does not seem to be significantly related to curation. The best example of this would be "Baristas and other Counter Attendants, Cafeteria, Food Concession, and Coffee Shop", which are included in the same SOC category. According to O*NET, "Baristas" do indeed "Describe menu items to customers or suggest products that might appeal to them", but in the context of their wider job description ("Receive and process customer payments", "Clean or sanitize work areas, utensils, or equipment"), the curation function is subservient to performance-based operations. Moreover, the job description for "Counter Attendants, Cafeteria, Food Concession, and Coffee Shop" does not include any curation job tasks. It is difficult to say that baristas belong to a curating job category even though they themselves sometimes perform that function.

Bartenders are on the other side of the somewhat fuzzy Curator/Non-Curator dividing line. According to O*NET, they perform core curation tasks including "create drink recipes" and "plan bar menus"— that is, functions that require them to choose among symbolically-differentiated food and drink products. Like baristas, they also recommend menu items and guide consumer choice. This is especially true of cocktail bartenders, who Ocejo (2012) argues "control the conditions of entry and legitimacy for a niche within the drinks industry" (p.642) but based on the official descriptions is true generally. A standard bar setup has 9 spirits, plus a selection of wine, beer, and mixers, and has a clientele that can be highly uncertain about how to order. Even in less upmarket settings, the bartender is a key intermediary between the establishment and the customer's true preferences. Given the barriers between the bar patron and optimal product choice, it is easier to imagine a customer returning to a bar because of its knowledgeable bartenders than it is to imagine the same customer returning to a coffee shop for its baristas. More importantly, bartenders, unlike baristas, have been assigned their own occupational category and can therefore be more confidently coded as **"Core Curators".**

The full roster of "Core Curators" is listed in Table 4.6, along with the products that can be associated with each. When possible, product designations from the industry category are maintained. In

some cases, the occupation analysis suggests new kinds of products which are outputs of curation but inputs into final products. This is the case with design. Designers like Graphic Designers and Commercial Designers are embedded in most industries. In their work, they will inevitably borrow features of their design from earlier work, which requires that they choose from a multitude of possible options. This, in turn, requires choice — choice on their own behalf and on behalf of the client.

Table 4.6 Core Curation Occupational Titles

Occupation	Product	Occupation	Product
Marketing Managers	Advertising	Health Specialties Teachers, Postsecondary	Education
Art Directors	Advertising	Education Administrators, Postsecondary	Education
Copy Writers	Advertising	Art, Drama, and Music Teachers, Postsecondary	Education
Models	Advertising	Nursing Instructors and Teachers, Postsecondary	Education
Photographers	Advertising	Business Teachers, Postsecondary	Education
Advertising Sales Agents	Advertising	Education Teachers, Postsecondary	Education
Advertising and Promotions Managers	Advertising	English Language and Literature Teachers, Postsecondary	Education
Bartenders	Alcohol	Biological Science Teachers, Postsecondary	Education
Merchandise Displayers and Window Trimmers	Design	Mathematical Science Teachers, Postsecondary	Education
Meeting, Convention, and Event Planners	Design	Psychology Teachers, Postsecondary	Education
Graphic Designers	Design	Communications Teachers, Postsecondary	Education
Architects, Except Landscape and Naval	Design	Philosophy and Religion Teachers, Postsecondary	Education
Interior Designers	Design	Engineering Teachers, Postsecondary	Education
Fashion Designers	Design	Social Work Teachers, Postsecondary	Education
Landscape Architects	Design	Law Teachers, Postsecondary	Education
Commercial and Industrial Designers	Design	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	Education
Floral Designers	Design	Foreign Language and Literature Teachers, Postsecondary	Education
Jewelers	Design	Criminal Justice and Law Enforcement Teachers, Postsecondary	Education
Producers	Entertainment	Chemistry Teachers, Postsecondary	Education
Directors — Stage, Motion Pictures, Television, and Radio	Entertainment	Political Science Teachers, Postsecondary	Education

Program Directors	Entertainment	History Teachers, Postsecondary	Education
Talent Directors	Entertainment	Computer Science Teachers, Postsecondary	Education
Audio and Video Equipment Technicians	Entertainment	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	Education
Film and Video Editors	Entertainment	Environmental Science Teachers, Postsecondary	Education
Agents and Business Managers of Artists, Performers, and Athletes	Entertainment	Architecture Teachers, Postsecondary	Education
Poets, Lyricists and Creative Writers	Entertainment	Physics Teachers, Postsecondary	Education
Music Directors	Entertainment	Recreation and Fitness Studies Teachers, Postsecondary	Education
Music Composers and Arrangers	Entertainment	Economics Teachers, Postsecondary	Education
Set and Exhibit Designers	Entertainment	Anthropology and Archeology Teachers, Postsecondary	Education
Costume Attendants	Entertainment	Geography Teachers, Postsecondary	Education
Sound Engineering Technicians	Entertainment	Library Science Teachers, Postsecondary	Education
Makeup Artists, Theatrical and Performance	Entertainment	Sociology Teachers, Postsecondary	Education
Fine Artists, Including Painters, Sculptors, and Illustrators	Entertainment	Forestry and Conservation Science Teachers, Postsecondary	Education
Technical Writers	Entertainment	Agricultural Sciences Teachers, Postsecondary	Education
Multimedia Artists and Animators	Entertainment	Home Economics Teachers, Postsecondary	Education
Choreographers	Entertainment	Vocational Education Teachers, Postsecondary	Education
Art Therapists	Entertainment	Public Relations Specialists	Public Relations
Music Therapists	Entertainment	Real Estate Sales Agents	Real Estate
Editors	Entertainment	Real Estate Brokers	Real Estate
Actors	Entertainment	Medical Scientists, Except Epidemiologists	Research
Singers	Entertainment	Education Administrators, Elementary and Secondary School	Research
Musicians, Instrumental	Entertainment	Climate Change Analysts	Research
Dancers	Entertainment	Environmental Restoration Planners	Research
Library Technicians	Entertainment	Industrial Ecologists	Research
Video Game Designers	Entertainment	Environmental Scientists and Specialists, Including Health	Research
Librarians	Entertainment	Biostatisticians	Research
Audio-Visual and Multimedia Collections Specialists	Entertainment	Statisticians	Research

Radio and Television Announcers	Entertainment	Biochemists and Biophysicists	Research
Public Address System and Other Announcers	Entertainment	Urban and Regional Planners	Research
Curators	Entertainment	Soil and Water Conservationists	Research
Archivists	Entertainment	Physicists	Research
Craft Artists	Entertainment	Zoologists and Wildlife Biologists	Research
Human Resources Specialists	Human Resources	Geoscientists, Except Hydrologists and Geographers	Research
Clinical Data Managers	Human Resources	Economists	Research
Logistics Managers	Human Resources	Epidemiologists	Research
Human Resources Managers	Human Resources	Education Administrators, Preschool and Childcare Center/Program	Research
Labor Relations Specialists	Human Resources	Anthropologists	Research
Sales Agents, Financial Services	Investment	Archeologists	Research
Securities and Commodities Traders	Investment	Sociologists	Research
Personal Financial Advisors	Investment	Chemists	Research
Financial Analysts	Investment	Historians	Research
Investment Fund Managers	Investment	Astronomers	Research
Insurance Sales Agents	Investment	Geographers	Research
Sales Agents, Securities and Commodities	Investment	Mathematicians	Research
Broadcast News Analysts	Journalism	Hydrologists	Research
Reporters and Correspondents	Journalism	Materials Scientists	Research
Interpreters and Translators	Language	Survey Researchers	Research
Manicurists and Pedicurists	Personal Appearance	Graduate Teaching Assistants	Research
Hairdressers, Hairstylists, and Cosmetologists	Personal Appearance	Biologists	Research
Skincare Specialists	Personal Appearance	Distance Learning Coordinators	Research
Barbers	Personal Appearance	Bioinformatics Scientists	Research
Funeral Attendants	Personal Appearance	Molecular and Cellular Biologists	Research
Shampooers	Personal Appearance	Geneticists	Research
Locker Room, Coatroom, and Dressing Room Attendants	Personal Appearance	Remote Sensing Scientists and Technologists	Research

Morticians, Undertakers, and Funeral Directors	Personal Appearance	Soil and Plant Scientists	Research
Concierges	Travel	Food Scientists and Technologists	Research
Recreational Therapists	Travel	Animal Scientists	Research
Travel Agents	Travel	Fitness and Wellness Coordinators	Research
Tour Guides and Escorts	Travel	Microbiologists	Research
Travel Guides	Travel	Atmospheric and Space Scientists	Research
Clergy	Social Capital	Political Scientists	Research
Directors, Religious Activities and Education	Social Capital		

Symbolic creation is generally a form of curation unto itself. Symbolic work inevitably relies on influence from and references to prior symbolic products. These influences should be thought of as decisions to select some features and forego many more. Applying Dennett's (1991) maxim to the visual arts realm, we can say that each painter is Cubism's (or Art Nouveau's or Pop Art's) opportunity to make another piece.

Art is not the only domain that demands that curators choose among symbolic influences. Venture capital concepts are often described in such referential terms (this firm is 'like X for Y'). Pets.com was famously supposed to be Amazon for pets. At its pre-VC stage, Sean Parker perceived Facebook as the "Napster of social networking"— that is, a firm that combined social networking technology with a strong brand (Mezrich, 2009). The feature architecture and design choices were similar in obvious ways to those of Myspace and Friendster. After Facebook itself became a large concern other social networking ventures sought to become 'The Facebook' of something else. To successfully emulate previous products, VCs must identify the elements they want to or can get away with copying, and then implement them. When the element in question is symbolic (e.g., brand, perceived market), the emulating VC must curate from a wider universe of options.

With the subtle relationship between symbolic curation and creation in mind, *creators* of symbolic forms (e.g., Musicians, Creative Writers, Architects, Reporters) have been designated here as curators in addition to those (Music Directors, Librarians, Real Estate Brokers, Editors) who might be more easily

recognized as such. The key difference between the two categories is that in the former case, curation is directed toward symbolic inputs, whereas in the latter case it happens among final products and is more obvious. This coding decision is made more sensible by the realization that the SOC system tends to conflate curators and creators anyway. Reviewers of wine, theater video games and more are "Authors and Writers" — that is, creators.

Personal Appearance professionals are also hybrids of artists and brokers. They work in consultation with their clients to choose 'the right' style for their clients, but they are also sellers of beauty products like shampoos and nail polish. Salons have traditionally earned revenue by endorsing lines of beauty products (Wood, 2017). They tend to, in these schemes, be paid based on sales, meaning that they must balance their 'tastemaking' power, manufacturer terms, and consumer preferences when they decide who to work with. The curation decision, then, is complex but potentially crucial.

Educators at the post-secondary level are included as Core Curators in consideration of their role as course designers, as well as — at least in many cases — their research role. Researchers themselves are also coded as curators. At the risk of redundancy, we can say that the researcher's mental model of which scholarly knowledge is valuable and which is worth neglecting is symbolic. Decisions about which areas to study and which methods to employ are themselves rooted in what these things represent. For this reason, all research-creating and research-facing professionals are called curators.

Religious clergy and directors are listed as curators. At a basic level, these workers must program religious activities in a way that makes the religious traditions of a congregation accessible to modern followers. Even the most orthodox practitioners are interested in the market and will keep an eye on the number of people who come through the doors. They must select religious texts and practices to highlight and broker a greater connection between congregants and the underlying faith.

The third category are white collar professionals who engage in curation in the course of their professions but are not primarily curators. These are "**Curating Professionals",** and include Managers, K-12 Teachers and Instructors, Doctors and Specialists, and Lawyers. These jobs are bracketed from the other two groups for reasons that differ by group.

Managers who are separate from HR, and below the CEO level (which is considered Core because it oversees human resources), will tend to have some autonomy over hiring and firing. But their main responsibility is ensuring continuity between firm strategy and operations. Management requires persuasive communication, training, nuanced interpretation of employee and customer behavior, and still more symbolic tasks beyond HR. It also demands attention to an assurance of firm performance and is therefore a sort of hybrid function.

K-12 teachers are assumed be less curatorial than their Post-Secondary colleagues. They have less autonomy in the design of their curricula, if only because state and local educational regulators are more prescriptive about primary and secondary standards. They are also assumed not to be active researchers, unlike their postsecondary peers. Textbooks may be chosen centrally — either at the school or school district level — but usually in consultation with teachers, and the decision over how to teach a textbook (i.e., what to skip, what to emphasize) will fall to teachers. Teachers will, also, tend to select their own supplemental materials to draw out what is in the required texts (Marple, 2017). That they retain some autonomy over their curriculum is evident from the fact that they also are the targets of marketing efforts by course materials companies.

Doctors are two-way vessels for symbolic information. They must absorb all relevant information from the client, even the information that is not stated outright, and decide which is of most importance to the diagnosis. O*NET lists Social Perceptiveness as a key skill, by which they mean "[being] aware of others' reactions and understanding why they react as they do". Like other knowledge practitioners, they must continuously update their knowledge by consulting medical journals and peers (Daei et al.., 2020). They must also decide the best communication style for each patient and situation, enacting bedside manner through these decisions. Doctors prescribe pharmaceuticals — a function that is mostly performance based, but more symbolic in some situations, such as when they must choose between a 'generic' and 'name brand' drug, or among drugs with the same active ingredients. With all of this in mind, doctors also have a lot in common with engineers. They deploy stable and known knowledge about the

human body in a reliable way. Expected conduct is somewhat codified and doctors who run afoul of "best practice" risk losing their license.

Lawyers must also be choosy listeners and proper communicators. In addition, legal opinions are subject to an element of uncertainty in the form of the opinion of opposing counsel. Legal disputes will always feature at least two contrasting interpretations of the law, introducing additional symbolic uncertainty that the lawyer themselves must manage. Lawyers have less curatorial freedom than Core Curators, in the sense that they cannot change the underlying laws. The law is not really like a canon (arts and culture) or convention (VC, finance, research) — something that can be wholly dismissed in a revolutionary act of symbolic judgment. It is written outside of the legal system, and certain interpretations made within that system (i.e., common law) are binding. Again, conduct is subject to the review of professional boards, which expect that all conduct abides by the official rules.

Validation

As is the case with industrial classification, this method is not intended to be foolproof. However. occupational categories are relatively more reliable because both they and the administrative data they are based on are concerned with job function. In the previous section we were indirectly inferring product characteristics from industry data which was also based on establishment type.

More encouragingly O*NET's Skills and Job Activities metrics give us an external means of evaluating the occupational typology. These dimensions are recorded as normalized 1-100 scores of the importance of a skill or activity — and the skill level required — for a given job. As a reference, for "Complex Problem Solving", Chief Executives have an importance score of 85 and a level of 71, while Cleaners of Vehicles and Equipment have scores of 25 and 23.

If the curation typology described above is valid, then we should expect for sorting along relevant items to somewhat mirror the 3-part system. No O*NET item exactly matches the curation function (choosing among symbolically-differentiated products or facilitating this choice), but the skill "Judgement and Decision Making" and the Job Activity "Interpreting the Meaning of Information for Others" are closely related. The former is defined as "Considering the relative costs and benefits of potential actions to

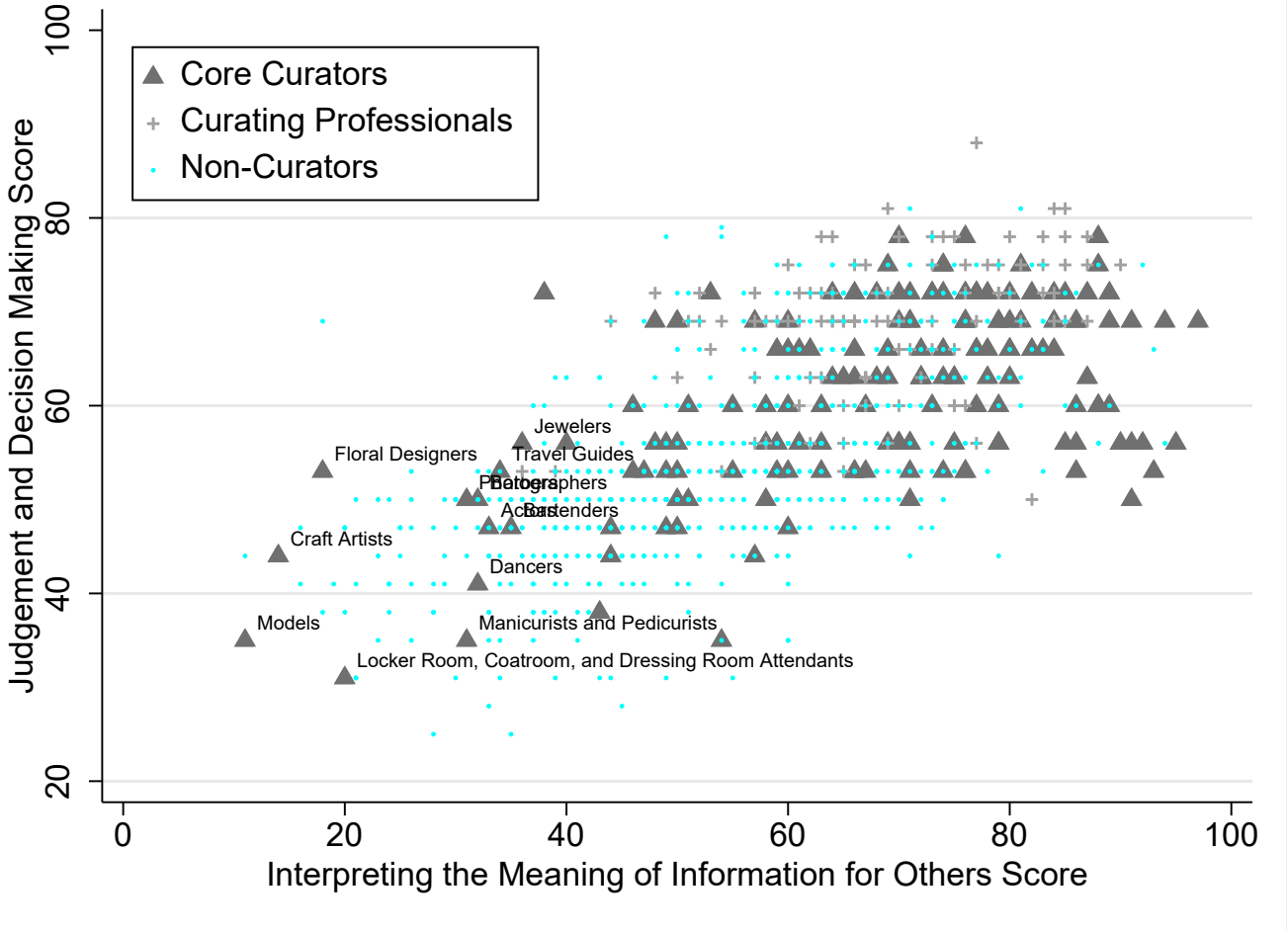
choose the most appropriate one" and the latter as "Translating or explaining what information means and how it can be used". Neither item refers explicitly to symbolic information, so presumably they include curation among other kinds of information processing and analysis.

Figure 4.3 plots occupation importance scores[16] for these two items by group. As we might expect, we see the clustering of curating occupations in the top right, and non-curating occupations in the bottom left. A small set of labeled outliers which includes Actors, Bartenders, and Manicurists does not score highly on either dimension. The existence of these outliers might suggest a coding error. On the other hand, it might suggest that symbolic forms of analysis and judgement tend to be under—recognized or underrated. We do not currently have the means to fully resolve these inconsistencies and will therefore proceed with the understanding that the typology itself is somewhat imprecise. There are also high scoring non-curatorial occupations. These mostly relate to science (Engineers, Statistical Assistants) and skilled services (Detectives, Midwives, Loan Officers), but are not necessarily symbolic. Such 'false positives' should be expected, since the items do not distinguish between symbolic and objective knowledge, and indeed O*NET's Knowledge items do not permit an easy classification of knowledge by type[17].

[16] Correlation coefficients between importance and level are very highly correlated (r=.98), so the choice of metric does not change the shape of the distribution.

[17] Some examples of Knowledge categories are Economics and Accounting, Food Production, and Geography, none of which are categorically symbolic or non-symbolic.

Figure 4.3 Occupation-Level Importance Scores on Two Relevant O*NET Items, by Category



A k-means cluster analysis pushes the analysis in an ever more rigorous direction, returning three groups of occupations based on these O*NET items. Here importance and level statistics are used as inputs. Table 4.7 shows the distribution of total employment by product type across the three sectors. Only 9% of Core Curators and 4% of Curating Professionals are in Cluster 1, compared to a plurality of Non-Curators. Cluster 3 appears to be the higher human capital cluster — it is where nearly 90% of professionals, including all Doctors, Professors, and Lawyers, are employed. Most entertainers, advertising real estate workers, and managers are also in this cluster. Cluster 2 would seem to be somewhat lower in human capital — it has a clear majority of travel, personal appearance, investment and human resources workers, and many designers and journalists.

These results support the idea that there are non-curating, professional curating, and non-professional curating occupations in the economy. They depart from the original intuition to the extent that they include curating professionals in the most skilled group. It is unclear whether clusters based on more precise skill and activity data (i.e., symbolic judgement and symbolic interpretation) would be better matches, but there is good reason to believe that they would.

Table 4.7 Share of Employment by Curator Type and O*NET Item Cluster

Product Type	Cluster 1	2	3
Core Curators	**9%**	**35%**	**55%**
Advertising	9%	36%	55%
Alcohol	100%	0%	0%
Design	8%	58%	34%
Entertainment	5%	30%	65%
Human Resources	0%	64%	36%
Investment	0%	66%	34%
Journalism	0%	52%	48%
Language	0%	0%	100%
Personal Appearance	33%	63%	4%
Postsecondary Education	0%	0%	100%
Public Relations	0%	0%	100%
Real Estate	0%	21%	79%
Research	0%	11%	89%
Social Capital	0%	0%	100%
Travel	0%	85%	15%
Curating Professionals	**4%**	**9%**	**87%**
Education	9%	3%	88%
Legal Services	0%	0%	100%
Management	3%	15%	83%
Medical Resources	0%	0%	100%
Non–Curators	**42%**	**30%**	**28%**
Grand Total	**39%**	**27%**	**34%**

Estimating the Number of Curating Workers

We proceed to employment estimates using the typology defined above and OES data from May of 2019. OES data is tabulated at a slightly lower resolution than O*NET data. There are 734 OES categories, compared to 968 for O*NET, but all employment in the O*NET universe is represented in OES, and OES is fully codable according to the 3-part typology described above. Table 4.8 provides a snapshot of

how many curating workers there are, showing the number of employees by occupation type as well as wage share and employment share.

There are more than 22 million curating occupations in the economy, representing 17% of the workforce. This corps is overwhelmingly composed of managers. There are closer to 16 million curating jobs, equivalent to 1 out of every 9 workers, excluding managers. For comparison, there are roughly as many non-management curators in the economy as there are workers (17 million) in California.

Table 4.8 Key Employment Statistics by Occupation Type

Occupation Type	Employment	Employment Share	Wage Share	Wage/ Employment Ratio
Core Curators	**8,888,430**	**6.8%**	**9.4%**	**137%**
Advertising	560,210	0.4%	0.9%	207%
Alcohol	646,850	0.5%	0.3%	53%
Design	781,330	0.6%	0.6%	107%
Entertainment	838,150	0.6%	0.7%	109%
Human Resources	919,410	0.7%	1.1%	152%
Investment	1,058,120	0.8%	1.4%	166%
Journalism	140,070	0.1%	0.1%	129%
Language	58,870	0.0%	0.0%	107%
Personal Appearance	662,350	0.5%	0.3%	61%
Postsecondary Education	1,333,860	1.0%	1.8%	178%
Public Relations	244,730	0.2%	0.2%	132%
Real Estate	205,060	0.2%	0.2%	124%
Research	1,256,080	1.0%	1.5%	159%
Social Capital	75,000	0.1%	0.1%	101%
Travel	108,340	0.1%	0.1%	76%
Curating Professionals	**13,537,980**	**10.4%**	**20.5%**	**197%**
Education	4,499,050	3.5%	3.9%	114%
Legal Services	657,170	0.5%	1.4%	273%
Management	6,411,450	4.9%	11.3%	228%
Medical Resources	1,970,310	1.5%	3.9%	259%
Non–Curators	**107,525,330**	**82.7%**	**70.1%**	**85%**
Grand Total	**129,951,740**	**100.0%**	**100.0%**	**100.0%**

Not surprisingly, we see that the lion's share of workers — 83%, are not curators — and that 7 out of every 10 dollars in wages are earned outside of these occupations. Curating professionals as a class earn about twice as much in wages as their workforce count would suggest. Somewhat surprisingly, Core Curators as a class have higher than average wages on average. Alcohol (i.e. bartenders) and Personal Appearance curators earn well less than the average worker, while those in Language, Design and Entertainment earn somewhat more.

Core curating occupations have grown as a percentage of the labor force (Table 4.9). This growth has been powered by Human Resource and Research jobs, with minor growth in other categories. Wage share growth has been even higher. The Curating Professional share of occupations and wages is essentially the same, with most of the declines happening among non-curator occupations. These trends somewhat corroborate the idea that curation has grown with recent economic development. They also suggest that recent technological changes in the form of computerization and containerization, which have tended to produce differential effects across the labor force (Autor, et al. 2003), are generally more complementary than substituting with respect to curation jobs.

Table 4.9 Composition of the Labor Force by Job Type: 2019 vs 1998

Occupation Type	2019 Employment Share	1998 Employment Share	Ratio	2019 Wage Share	1998 Wages Share	Ratio
Core Curators	**6.8%**	**5.4%**	**127%**	**9.4%**	**7.6%**	**123%**
Advertising	0.4%	0.6%	76%	0.9%	1.0%	88%
Alcohol	0.5%	0.4%	133%	0.3%	0.2%	138%
Design	0.6%	0.5%	125%	0.6%	0.6%	114%
Entertainment	0.6%	0.5%	126%	0.7%	0.6%	115%
Human Resources	0.7%	0.2%	348%	1.1%	0.3%	385%
Investment	0.8%	0.7%	110%	1.4%	1.4%	97%
Journalism	0.1%	0.1%	105%	0.1%	0.1%	98%
Language	0.0%	0.0%	273%	0.0%	0.0%	279%
Personal Appearance	0.5%	0.4%	117%	0.3%	0.3%	113%
Postsecondary Education	1.0%	0.9%	115%	1.8%	1.5%	120%
Public Relations	0.2%	0.1%	148%	0.2%	0.2%	143%
Real Estate	0.2%	0.1%	114%	0.2%	0.2%	106%
Research	1.0%	0.6%	160%	1.5%	1.1%	142%
Social Capital	0.1%	0.0%	131%	0.1%	0.0%	130%
Travel	0.1%	0.1%	59%	0.1%	0.1%	56%
Curating Professionals	**10.4%**	**10.9%**	**95%**	**20.5%**	**20.2%**	**102%**
Education	3.5%	3.7%	92%	3.9%	4.7%	85%
Legal Services	0.5%	0.5%	105%	1.4%	1.4%	100%
Management	4.9%	5.8%	86%	11.3%	12.6%	89%
Medical Resources	1.5%	0.7%	217%	3.9%	1.3%	309%
Non–Curators	**82.7%**	**83.7%**	**99%**	**70.1%**	**72.2%**	**97%**

Are There Employment Effects from Variety?

Compared to the industry data, the occupational data more clearly suggests that labor markets have adjusted to increases in product variety. The industry analysis does not detect a change in the symbolic share of the economy over the past twenty years, a period that includes much of the 'digital revolution'. However, measures of curators themselves do indicate that curating employment has grown with symbolic variety.

Such a pattern is fully consistent with the view, outlined in the introduction and in Chapter 1, that ongoing techno-cultural changes are leading to increased curation activity. There is no a priori reason to expect that the additional variety available in contemporary markets is labor-intensive. A digital store like Amazon.com surely demands *fewer* employees per-variety than do its brick-and-mortar cousins. As more

variety floods into symbolic sectors, there is no reason to believe that the economy needs to free up more labor for the same.

However, if curation itself is more in-demand as variety grows, then we should expect the supply of curators to increase. The modest decline of curating professionals as a share of the workforce does not necessarily or even probably reflect demand for less curation as much as it reflects less demand for the computer-substituting content of these jobs.

IV Studying Curation from the Field Up

Curation as an Organized Field

It is necessary to conclude with a frank assessment of the limitations of occupational data. At bottom, occupational classification systems are attempts to categorize types of work rather than delimit a common labor market. Venture capital analysts in certain product categories inhabit the same world, as do social media influencers and wine critics. More formally these might be called "organizational fields", which DiMaggio and Powell (1983) define as "a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (p.148). The occupation data deployed above uses messy occupational data to count how much curation might be happening in the economy, but it is poorly suited to the task of mapping how curation works.

Some detailed occupation categories overlap with organizational fields. Not completely incidentally, there are examples of these in Table 4.9. Political Scientists largely coincide with the organized field of public policy, which involves think tanks and universities (suppliers), politicians and agencies (customers) and regulatory agencies (associations such as the American Political Science Association). We can tell similar stories about Directors, Producers and Fashion Designers. Dancers, Musicians, Lawyers, and many more detailed occupations contain members of numerous organizational fields. Ballet Dancers and Contemporary Dancers do not belong to the same member associations, trial lawyers have their own milieu and so forth.

Organized fields can and do run into each other. There is an organized field for macroeconomics which sits between public policy and other economic disciplines. There is a multimedia entertainment complex. There are multiple systems (i.e., Venture Capital, Private Equity) for financing high-tech startups and multiple high-tech startup systems. Even more confoundingly from a classification standpoint, workers' fields will often overlap. The rosters of academic societies (e.g., the Urban Affairs Association and the American Association of Geographers) will bleed into each other as will boards of directors for very different kinds of companies. Any attempt to classify these worlds with some unifying system is bound to fail given the fuzzy boundaries between them and the open nature of most production networks.

An alternate 'way in' to studying the industrial organization of curation is to begin by identifying curating actors and organizations and proceed to establishing their structure and geography. This approach trades a degree of statistical power for the assurance that the study site and subjects are related to each other.

Netflix as Curator

The case of Netflix demonstrates how curation can be studied at a more granular level. Netflix is the premier film and television streaming service in the United States, and the 20th most visited website in the world per Alexa (2020). The firm is a model for resiliency in the face of technological disruption. It started as a video rental service that mainly competed with Blockbuster by distributing DVDs through the mail. It was among the first successful companies to exploit the 'long tail' possibilities of e-commerce (Anderson, 2007), whereby internet-based services can maintain wider selections than brick and mortar operations because they can maintain a central inventory.

No sooner than it had vanquished Blockbuster, Netflix itself became threatened by the arrival of the fully digitized entertainment industry at the end of the 2000s. After initially betting on an unsuccessful download-based home video device[18], the company embraced streaming and built the largest streaming platform in the world. Its membership expanded from 23 to 94 million between 2011 and 2016 (Kemerer

[18] The device was spun off and ultimately rebranded as Roku.

and Kimball Dunn, 2017). The pivot to streaming represented a shift from a long tail 'something for everyone' model to a model that required the firm to judiciously choose the titles for which it wanted to secure rights. Under the streaming model, it became more important to make the right bets, on both titles themselves and on content owners. In this way, the firm had to become like post-Gutenberg English presses. Not even a cash-rich firm like Netflix could acquire rights to everything. It now had to rely on effective curation.

2013 saw the firm enter the world of original content, like its smash hit *House of Cards,* and it has focused its activities on this area since, reinvesting most of its revenue into the construction of an original library over which it has complete control. It currently spends 2 out of every 3 content dollars on original content. As a creator and selector, it is involved in entertainment curation at virtually every stage.

As accessible as administrative data is, a study of a firm like Netflix would better grasp how many curators there are within an organized field, and how this has changed over time. Such a study could also potentially drill down into total compensation, value-added and numerous other dimensions that are not available in standard occupational data. I hope to be able to pursue research along these lines in subsequent studies.

V Conclusion

This chapter has sought to establish key facts about the role of curation in the modern US economy. Along the way, it has also demonstrated how difficult it is to operationalize the constructs of "Symbolic Economy" and "Curation" using standard statistical tools.

We know that at least 34% of employment in the economy is channeled towards industries that produce goods with a degree of symbolic differentiation. 11% is Overwhelmingly symbolic and the rest Preponderantly so. These are the goods that may be prone to subjective uncertainty and dependent on the decisions of curators, and we know that 14% of economic activity is devoted to clearly non-symbolic goods. In between there are industries like automobile manufacturing, where the degree to which symbolic-differentiation is present depends on market segment. Sports cars have strong symbolic differentiation,

whereas second-hand cars are chosen more for performance; so it goes with a great many consumer goods and even agricultural goods. The 'heirloom tomato' was once the only kind of tomato on offer — now it represents some platonic ideal of tomatoness. Based on the employment data that can be coded, it seems as though the clearly symbolic area of the economy has roughly two employees for every 1 employee in the clearly non-symbolic sector. Unfortunately, most employment is in industries that cannot be coded as symbolic using the NAICS system, either because they are Mixed categories, or because they are coded into residual sectors.

Occupation-based estimates of how many curating occupations exist are easier to generate because there is less mixing at the category level. The three-part typology presented above is intended to very roughly approximate what curation looks like at the occupational level but is also mostly reproducible using O*NET statistics. Based on this typology, it is estimated that 7% of the labor force is directly engaged in work that is substantially devoted to curation, and an additional 10% are professionals like Doctors, Lawyers and Managers who are inevitably asked to curate as part of their job. Core Curation appears to be growing as a proportion of the US economy, as non-curation work declines and Professional Curation work holds steady. Human resources professionals represent the fastest growing curating category. A possible follow-up study might consider the degree to which this reflects secular change in industrial composition of the sort described in Chapter 1, or lower relative productivity in the sector (i.e., cost disease). Before satisfying conclusions are to be drawn about the extent of curation's growth, it will be necessary to deploy better administrative data and to directly study the growth of curation within firms and organizational fields.

Appendix 3.1 Industries Producing a Mix of Symbolically-differentiated and Objectively-Differentiated Products

Mixed Products Industries	
Agriculture, Forestry, Fishing and Hunting (not covered in economic census)	Outpatient Care Centers
Construction	Medical and Diagnostic Laboratories
Textile Mills	Home Health Care Services
Textile Product Mills	Individual and Family Services
Furniture and Related Product Manufacturing	Vocational Rehabilitation Services
Furniture and Home Furnishings Stores	Tobacco Manufacturing
Electronics and Appliance Stores	Printing and Writing Paper Merchant Wholesalers
General Merchandise Stores	Stationary and Office Supply Merchant Wholesalers
Water Transportation	General Line Grocery Merchant Wholesalers
Couriers and Messengers	Packaged Frozen Food Merchant Wholesalers
Monetary Authorities – Central Bank	Dairy Product (except dried or canned) Merchant Wholesalers
Hospitals	Poultry and Poultry Product Merchant Wholesalers
Leather and Hide Tanning and Finishing	Fish and Seafood Merchant Wholesalers
Footwear Manufacturing	Meat and Meat Product Merchant Wholesalers
Converted Paper Product Manufacturing	Fresh Fruit and Vegetable Merchant Wholesalers
Computer and Peripheral Equipment Manufacturing	Tobacco and Tobacco Product Merchant Wholesalers
Audio and Video Equipment Manufacturing	Pharmacies and Drug Stores
Manufacturing and Reproducing Magnetic and Optical Media	Optical Goods Stores
Electric Lighting Equipment Manufacturing	Office Supplies and Stationary Stores
Household Appliance Manufacturing	Pet and Pet Supplies Stores
Automobile and Light Truck Manufacturing	Consumer Electronics and Appliances Rental
Motor Vehicle Body and Trailer Manufacturing	Architectural Services
Motor Vehicle Parts Manufacturing	Engineering Services
Aerospace Products and Parts Manufacturing	Drafting Services
Railroad Rolling Stock Manufacturing	Building Inspection Services
Ship and Boat Building	Geophysical Surveying and Mapping Services
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	Surveying and Mapping (except geophysical) Services
Furniture and Home Furnishing Merchant Wholesalers	Testing Laboratories
Electrical and Electronic Goods Merchant Wholesalers	Hotels (except casino hotels) and Motels
Drugs and Druggists' Sundries Merchant Wholesalers	Food Service Contractors
Apparel, Piece Goods and Notions Merchant Wholesalers	Caterers
Automobile Dealers	Mobile Food Services
Other Motor Vehicle Dealers	Funeral Homes and Funeral Services
Automotive, Parts, Accessories, and Tire Stores	Drycleaning and Laundry Services
Grocery Stores	Linen and Uniform Supply
Sporting Goods, Hobby and Musical Instrument Stores	Pet Care (except veterinary services)
Vending Machine Operators	Hazardous Waste Collection
Scheduled Air Transportation	Hazardous Waste Treatment and Disposal
Nonscheduled Air Transportation	Limited-service Restaurants
Offices of Physicians	Cafeterias, Grill Buffets and Buffets
Offices of Dentists	Snack and Nonalcoholic Beverage Bars
Offices of Other Health Practitioners	

Appendix 3.2. Industries Producing Products with Negligible Symbolic Content

Negligible Products Industries	
Mining, Quarrying, and Oil and Gas Extraction	Machine Shops
Utilities	Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing
Couriers and Messengers	Metal Tank (Heavy Gauge) Manufacturing
Data Processing, Hosting, and Related Services	Metal Valve Manufacturing
Truck Transportation	Plate Work and Fabricated Structural Product Manufacturing
Oil and Gas Extraction	Power Boiler and Heat Exchanger Manufacturing
Support Activities for Mining	Spring and Wire Product Manufacturing
Utilities	Turned Product and Screw, Nut, and Bolt Manufacturing
Printing and Related Support Activities	Agricultural Implement Manufacturing
General Freight Trucking	Commercial and Service Industry Machinery Manufacturing
Specialized Freight Trucking	Construction Machinery Manufacturing
Couriers and Express Delivery Services	Engine, Turbine, and Power Transmission Equipment Manufacturing
Local Messengers and Local Delivery	Industrial Machinery Manufacturing
Millwork	Material Handling Equipment Manufacturing
Sawmills and Wood Preservation	Metalworking Machinery Manufacturing
Asphalt Paving, Roofing, and Saturated Materials Manufacturing	Mining and Oil and Gas Field Machinery Manufacturing
Petroleum Refineries	Pump and Compressor Manufacturing
Adhesive Manufacturing	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
Artificial and Synthetic Fibers and Filaments Manufacturing	Audio and Video Equipment Manufacturing
Explosives Manufacturing	Computer and Peripheral Equipment Manufacturing
Fertilizer Manufacturing	Manufacturing and Reproducing Magnetic and Optical Media
Industrial Gas Manufacturing	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
Other Basic Inorganic Chemical Manufacturing	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
Pesticide and Other Agricultural Chemical Manufacturing	Semiconductor and Other Electronic Component Manufacturing
Petrochemical Manufacturing	Telephone Apparatus Manufacturing
Resin and Synthetic Rubber Manufacturing	Battery Manufacturing
Laminated Plastics Plate, Sheet (except packaging), and Shape Manufacturing	Communication and Energy Wire and Cable Manufacturing
Plastics Bottle Manufacturing	Electric Lamp Bulb and Part Manufacturing
Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing	Electrical Equipment Manufacturing
Plastics Pipe, Pipe Fitting, and Unlaminated Profile Shape Manufacturing	Lighting Fixture Manufacturing
Polystyrene Foam Product Manufacturing	Major Household Appliance Manufacturing
Rubber and Plastics Hoses and Belting Manufacturing	Small Electrical Appliance Manufacturing
Tire Manufacturing	Wiring Device Manufacturing
Urethane and Other Foam Product (except Polystyrene) Manufacturing	Aerospace Product and Parts Manufacturing
Abrasive Product Manufacturing	Automobile and Light Duty Motor Vehicle Manufacturing
Cement Manufacturing	Heavy Duty Truck Manufacturing
Clay Building Material and Refractories Manufacturing	Motor Vehicle Brake System Manufacturing
Concrete Pipe, Brick, and Block Manufacturing	Motor Vehicle Electrical and Electronic Equipment Manufacturing

Glass and Glass Product Manufacturing	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
Gypsum Product Manufacturing	Motor Vehicle Metal Stamping
Lime Manufacturing	Motor Vehicle Steering and Suspension Components (except spring) Manufacturing
Pottery, Ceramics, and Plumbing Fixture Manufacturing	Motor Vehicle Transmission and Power Train Parts Manufacturing
Ready-Mix Concrete Manufacturing	Railroad Rolling Stock Manufacturing
Alumina and Aluminum Production and Processing	Coal and Other Mineral and Ore Merchant Wholesalers
Copper Rolling, Drawing, Extruding, and Alloying	Construction and Mining (except oil well) Machinery and Equipment Merchant Wholesalers
Ferrous Metal Foundries	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers
Iron and Steel Mills and Ferroalloy Manufacturing	Farm and Garden Machinery and Equipment Merchant Wholesalers
Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	Hardware Merchant Wholesalers
Nonferrous Metal (except Aluminum) Smelting and Refining	Industrial Machinery and Equipment Merchant Wholesalers
Nonferrous Metal Foundries	Industrial Supplies Merchant Wholesalers
Rolling and Drawing of Purchased Steel	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers
Forging and Stamping	Metal Service Centers and Other Metal Merchant Wholesalers
Hardware Manufacturing	Photographic Equipment and Supplies Merchant Wholesalers
Recyclable Material Merchant Wholesalers	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers
Refrigeration Equipment and Supplies Merchant Wholesalers	Support Activities for Rail Transportation
Service Establishment Equipment and Supplies Merchant Wholesalers	Farm Product Warehousing and Storage
Tire and Tube Merchant Wholesalers	General Warehousing and Storage
Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	Refrigerated Warehousing and Storage
Farm Supplies Merchant Wholesalers	Directory and Mailing List Publishers
Grain and Field Bean Merchant Wholesalers	Wired and Wireless Telecommunications Carriers
Livestock Merchant Wholesalers	Lessors of Miniwarehouses and Self-Storage Units
Petroleum and Petroleum Products Merchant Wholesalers (except bulk stations and terminals)	Lessors of Nonresidential Buildings (except miniwarehouses)
Petroleum Bulk Stations and Terminals	Engineering Services
Business to Business Electronic Markets	Document Preparation Services
Outdoor Power Equipment Stores	Exterminating and Pest Control Services
Gasoline Stations with Convenience Stores	Facilities Support Services
Fuel Dealers	Janitorial Services
School and Employee Bus Transportation	Materials Recovery Facilities
Taxi Service	Remediation Services
Urban Transit Systems	Waste Collection
Pipeline Transportation of Crude Oil	Waste Treatment and Disposal
Pipeline Transportation of Natural Gas	Ambulance Services
Pipeline Transportation of Refined Petroleum Products	Medical and Diagnostic Laboratories
Airport Operations	Emergency and Other Relief Services
Freight Transportation Arrangement	Marinas
Marine Cargo Handling	Rooming and Boarding Houses, Dormitories, and Workers' Camps
Motor Vehicle Towing	Automotive Mechanical and Electrical Repair and Maintenance

Navigational Services to Shipping	Commercial and Industrial Machinery and Equipment (except automotive and electronic) Repair and Maintenance
Port and Harbor Operations	Home and Garden Equipment and Appliance Repair and Maintenance
Ice Manufacturing	Photofinishing

Chapter 5: The Curation Production Function and the Geography of Curation

I Toward a Functional Understanding of Creative Clusters

At the midpoint of this study, the relationship between technological change, symbolic variety, and curation is now clearer. Technological shocks can, at key junctures, dramatically lower barriers to symbolic production, freeing the entry of many more symbolically-differentiated goods into the market. These in turn create consumption possibilities but also transaction costs to consumption also known as 'paradoxes of choice'. More choice means more work to search and select products that, by virtue of their symbolic content, are difficult to evaluate.

Curation is an organizational response to variety congestion that builds market capacity to demand new variety, by both generating new needs for classes of goods and new demands for product varieties. The printing press was one key variety shock, and we appear to be currently encountering another in the form of the 'Third Industrial Revolution', wherein digital marketplaces, custom manufacturing, the globalization of culture, and other trends all result in more symbolic product choice. An inventory of curation in the economy shows that the share of the workforce in core curation occupations is increasing. As an industrial activity unto itself, curation also appears to benefit from local increasing returns to scale.

This chapter seeks to explain the micro processes that allow for curation to a) improve the match between consumers and new symbolic variety, and b) benefit from agglomeration. Curation adds value to the economy by lowering three forms of uncertainty related to symbolic consumption; forms of uncertainty that are exacerbated by shocks to the supply of variety. Curators convert their labor and a few distinct inputs into consumption decisions and heuristics for the same. Curation is alleged to be subject to agglomeration economies-- curators succeed more when they locate near each other and near producers of symbolically-differentiated products, and producers do better when they are near curators.

Previous accounts of how art worlds or 'creative districts' function (Currid, 2009; Lloyd, 2006; Becker, 1982) have posited that co-location is important without getting into the specific functions that are improved when producers cluster together, or moreover the production function for creative enterprise. However, if these huddled worlds are successful because of co-location, as is often assumed, then we should

be able to identify certain functions that are either more efficiently or more productively performed in the cluster. That is the objective of the present chapter: to better understand the production activities that attend creative production, and how agglomeration of those activities might be more than incidental to their functioning. The next section parses the curation production function, its inputs, outputs, and technological format. This a-spatial analysis leads into an extended discussion of the various mechanisms through which agglomeration improves the production of curation. The last section considers the relationship between 'centers' of curation and city systems. It is argued that curation centers tend to determine symbolic value across a system of cities.

II The Curation Production Function

Here, we think about how curation works at a microeconomic level. As with other functions, curation markets are composed of buyers who value curation and do not or cannot produce it themselves and sellers who are willing to forego other activities to curate. Curators lower uncertainty for their clients using a combination of symbolic product inputs, their judgement, and the judgement of others. We dissect all of this, but before we do that, we should restate the proposition that curation is a function within the division of labor in many parts of the economy. Stated more vernacularly, curation is an essential part of complex supply chains in many output sectors.

Professional Curators Perform Multiple Functions

Few people specialize entirely in curation in the way that the assembly line worker does. We can imagine the worker who shows up at the fridge factory at 8 am and works until 4pm screwing handles on fridge doors. The restaurant sommelier, to the extent that they just advise clients on which wines to pair with which foods, might be a pure case, but they are unusual. The wine reviewer is not only responsible for issuing judgements about symbolic products, but for communicating these judgements in a compelling way.

Similarly:

- In cultural industries, curators moonlight in other functions: the art critic must also write a compelling review, the awards body must put on an event, and the A&R representative must structure the development deal.
- The newspaper editor and news aggregator must also mind the form of the final product.
- It is rare for a high-impact tweeter to just use the *retweet* function; more often they will pair their tweets with original 'copy'.
- Venture capitalists succeed based on their ability to mentor and support their chosen firms, so it's not all about picking winners; Paul Graham, co-founder of legendary venture funder Y-Combinator, says that "all good investors supply a combination of money and help" (2008)
- The syllabus is an obvious example of a curated product. It designates a list of important knowledge, and implicitly assigns non-represented texts to the 'less important category'. This is a primary means of consolidating and canonizing academic thought. But the express purpose of preparing a syllabus is to give students something to do. In assigning readings, the professor is likely to think more about pedagogy than the role that they are playing in transmitting important knowledge[19].

A census of curation is difficult (see Chapter 4) because there do not tend to be industries and occupations that specialize in it exclusively. The production functions of curatorial occupations will therefore be heterogeneous in many respects. We focus here on how curation itself converts certain inputs into certain outputs. It is easier to recognize a pervasive curation economy when we home in on the common value that it provides.

[19] The trajectory of an academic's career is striking. They begin their training with limited curatorial power, reading what they are told and (slowly!) progress to a curator's role. As their career continues, an academic will curate more and for a wider audience.

Curators Lower Uncertainty in the Consumption of Symbolic Products

Across its many symbolic product contexts, curation lowers the uncertainty that accompanies consumption. Uncertainty in this case refers to a lack of foreknowledge about the utility of a set of products before consumption. The maximizing agent of neoclassical economics (see Salop, 1979 and Lancaster, 1974) wants to know all product characteristics in a market so that they can choose the product that most closely matches their preferences. The boundedly rational agent (Simon, 1982) wants something satisfactory, even if it is not the best. Neither agent can enter symbolic product markets with complete confidence, either because they cannot know enough information about product characteristics, or because they do not have the capability to process available information. Dosi and Egidi (1991) call the former uncertainty "substantive" and the latter "procedural", invoking Simon's twin concept of rationality. Both forms of uncertainty are relevant to the market for curation.

A key feature of the uncertainty that attends symbolic consumption is that it is what might be called "fundamental" (Dequech, 2010) or "Knightian" (1921) after one of its first observers. This means that the consumer cannot attach to the uncertainty of consumption some probability that a product will be optimal or satisfactory. This forecloses any calculation of expected outcome which might serve to anchor behavior. The uncertainty governing these markets is very different from the gambler's fate at a roulette wheel. The consumer does not know the extent of what they do not know.

We can think in terms of three uncertainties facing the consumers of symbolically-differentiated products, called "Symbolic", "Experience" and "Processing" uncertainties here. Symbolic uncertainty is common to all curation markets, and experience/ processing uncertainties are common but not inevitable. Each form is aggravated as additional product variety floods into markets.

Curation lowers symbolic uncertainty.

Symbolic uncertainty refers to a lack of information about the value of a product's symbolic characteristics, owing to the polysemic character of symbols across different individuals and settings. This is the form of uncertainty that is invoked by Stigler and Becker (1977) when they throw up their hands and say "*De Gustibus Non Est Disputandum*", and is a dimension of human judgement that Kant (2000) debated with

Hume (2018) about. It is what Richard Caves (2000), invoking William Goldman's observation about Hollywood, calls the "nobody knows" property of creative work. Symbolic uncertainty is the main reason why we need to describe a separate production system for symbolically-differentiated products. Producers must commit resources to varieties with a highly uncertain level of demand, due to properties of the products themselves and properties of the consumption experience.

As Karpik (2011) points out, each symbolic product is unique because it is evaluated along multiple, incommensurable dimensions, if only due to where and when it is made. Imagine a wine vintage. It will have a vector of genre characteristics, including whether it is red, white, or rosé. Its age and vineyard might alone designate it as special, but it also has a multitude of other characteristics that make it one of its own class[20]. Each of these dimensions must be weighed according to its own internal criteria.

Multidimensional products can in theory be assessed through the construction of an index that computes component scores and averages them, but this technique will only go so far. To construct an index, you need a set of valid assumptions about how the individual or market will weigh each component, and because each product is the first combination of its characteristics, there will be no empirical basis for such an index. Each product edition is its own prototype, and subject to the uncertainty that accompanies all new products.

There is also wide variability at the consumer level, owing to consumers own faculties and consumption contexts. Symbolic perception is anything but completely reliable, even among those who are supposed to have honed their sensitivity to certain symbols. Hodgson (2008) finds that only 10% of wine experts can recognize duplicate wine in a sample. Schubert (2013) shows higher but by no means perfect reliability among music listeners. Subjects in their study were asked to rate the emotional valence and arousal of music on a continuous basis via a joystick interface and to repeat the experiment between 6 and

[20] Even products that are theoretically easy to 'copy' are singular. This is why there are multiple recordings of Bach's Cello Suites in circulation, with more added each year. It is also why speculative investors are told *timing is everything*. In the next section, I will discuss provenance as another singularizing force.

12 months later. Only 80% of the ratings were the same, and ratings were especially unreliable at the beginning and end of the musical piece.

Kahneman and Miller (1986) propose one possible explanation for such intra-rater error. For them, category norms such as wine excellence and music emotionality are determined dynamically through the retrieval of similar experiences which serve to frame perception. Consumption of the same product in two different points in one's consumption history will yield different perceptions. Such framing effects are part of the influential situationist/subjectivist school of psychology, which insists that individual behavior differs more on external, situational factors (i.e., the anchors available in the environment) than individual traits (Ross and Nisbitt, 2011).

Products that are differentiated by symbolic (i.e., perceptually contingent) characteristics should be more at the mercy of such situational effects. They have suggestible and impermanent meanings that are continuously being rewired. Part of this may come down to a common tendency to adapt new uses for tools, and a universal human desire for novelty (Wundt, 1874). For whatever reason, the meaning of symbols is unreliable. As Costall and Richards (2013) put it:

> any thing could, in principle, mean anything. Thus, an apple can be eaten, but it can also be used as a missile, to make cider, a target for archery practice, as a brand image, etc. (p. 85)

Products that rely on what they do instead of what they represent (did the roof keep out the rain; did the car get you to work?) will be as reliable as their underlying performance. Chances are that if you buy a roof for a set of reasons in one year, you will be evaluating it on the same criteria when you return to the market in 20 years.

Returning to the producer's perspective, the maker of a vintage of wine or a film or a news edition, or a tweet, cannot be sure that their next edition will sell as well as their last, even if (or especially if) the two are very similar. The producer of the roofing material knows that if they achieve more protection for less price or less weight, then they will be successful. Uncertainty is lower for the roofer.

The curator helps to resolve uncertainty by providing some credible judgement of symbolic quality. The completely uncurated film in development could be the next big thing or worthy of forgetting. How it is

valued will largely depend on the comparators available to the consumers, and the consumers' experience. From the perspective of the producer, these are somewhat random factors. The producer knows how previous products with certain characteristics performed, and this knowledge can steer them in the direction of successful genres or creators but — perhaps because novelty wears off— this strategy will lead to decreasing returns. Thus, it is possible for the first through fourth 'Transformers' movies to be massive hits, while the fifth is a flop that loses $100 million for its studio (Scott, 2019).

Products that come with distinction will be easier to value, however. The film industry is filled with such "judgement devices" (Karpik, 2011), with the Academy Awards being only the most famous. In the language of behavioral psychology, we can say that these are quasi--permanent anchors that will reliably guide consumer decisions from situation to situation, regardless of the underlying symbols. Therefore, you see talent billed as "Oscar Winning" well after they have won. There are clear indications that such prizes lead to economic gains for producers, with Nelson (2001) and colleagues estimating that a Best Picture Oscar nomination is worth roughly $18 million at the box office in today's dollars[21].

Film awards tend to be more helpful to final consumers than to producers of films, who must curate among scripts and talent. Farther upstream, common joint arrangements (DeVany, 2004) between studios lower uncertainty via a separate mechanism. When separate firms jointly produce a film or divide production and distribution, they must share their respective estimates of how valuable they think the project is. These estimates are forms of curation. Similarly, in the venture capital world, valuation is a major influence on how firms make decisions. Venture arrangements are often syndicated, in part so that investors can hedge their bets and in part so that they can benefit from the "second opinion" of their co--investors on the value of prospective investments (Gompers and Lerner, 2001; Lerner, 1994).

The present treatment of symbolic knowledge here departs somewhat from a literature in economic geography on "symbolic knowledge bases". Asheim (2007) proposes that regional innovation systems can be differentiated based on the kinds of knowledge that they specialize in, with "symbolic"

[21] However, as Rossman and Schilke (2014) note for the Oscars, the attractiveness of such a distinction might create a market for the distinction and lead to negative expected outcomes for those participating in the market.

systems being fully distinguishable from "analytical" and "synthetic" knowledge. Echoing this view, Gertler (2008) says "symbolic knowledge is distinguished by its strongly aesthetic, affective, and semiotic nature." In contrast, the emphasis here on symbolic fields as fundamentally and irresolvably lacking in knowledge. Symbolic knowledge bases do not differ simply in their epistemology, but also in terms of how much knowledge is achievable. Symbolic value emerges with situations, is not controlled by physical laws and is therefore not anticipatable.

Curation may lower experience uncertainty.

Experience and processing uncertainty afflict symbolic and non-symbolic products alike. There is an extensive literature on "experience uncertainty" following Akerlof's (1970) model of information asymmetries in some product markets, most famously the used car market. Nelson (1970) was the first to differentiate between "Search Goods", whose salient qualities are known prior to purchase, and "Experience Goods", whose utility can only be determined after. There are also credence goods, like car repairs and heart surgeries, whose qualities might not be known even after consumption (Darby and Karni, 1973).

The used car, that is, the 'lemon' from Akerlof's original paper, is a perfect example of an experience good. In that case, information about a product's quality is known to the seller but not the buyer before purchase. The key difference between this and more symbolically-differentiated products is that in that case it is more common for the relevant information to not be known to either party. The venture founder may indeed be flogging a bad product, but often they will be the last to find out. The basis of this uncertainty is symbolic. A symbolic producer *cannot* know if a consumer will like their product because they cannot fully simulate the consumer's situation or overall perception.

According to the original Akerlof model, every car in the used market will be a lemon in equilibrium. The normal economy appears to operate at a less extreme steady state, with sellers of products that are not lemons satisfied to participate alongside hucksters. In markets where the producers are confident in the quality of their products, they can guarantee quality, as is the case with "certified used cars".

However, this is impossible when the producer, due to the symbolic value involved, does not know enough to issue a guarantee. Akelrof suggests that the routinization of purchasing through brands and licensure for providers only lowers the number of times that the consumer must consider a new product. It does not lower experience uncertainty on the first purchase.

Curation in the form of "reviewing" and "previewing" can, however, directly lower experience uncertainty. Film trailers are essentially free samples that give the audience a sense of whether a film matches their taste before they face the decision of whether to purchase tickets. Criticism is often conveyed as a review, with the critic describing the review experience (resolving experience uncertainty) while they issue symbolic judgements. In live theater, such reviews come to play a decisive role in determining production success(Healy, 2012). Similarly, venture capital financing accrues in stages, with more uncertainty-averse investors taking cues of earlier investors and signing on later, often at less favorable terms (Ruhnka and Young, 1987).

A product's degree of symbolic differentiation will determine the reliability of its reviews. Cars are somewhere to the left of theater productions on the Objective/Symbolic continuum. A car has numerous symbolic elements, some of which must be inspected (does the engine 'hum'?) to be verified. It also has performance criteria that can be tested with instruments. A car review tends to discuss both kinds of features. Still to the left of cars would be paper towel, which has standard features and will (barring lemons) absorb the same amount of material in every instance — only the amount of the spill will vary. Reviews on a site like Amazon.com will tend to emphasize performance in each use case, and not discuss symbolic characteristics like logo and packaging, which are less important in the user's experience. Public utilities such as electricity would be on the opposite end, with the material that comes out of the system being the same across the user network, and reviews from any user being fully representative.

On the symbolic side of the economy, including arts and culture and education, customers will rely more on reviews from their personal networks than from the market because they are closer to their personal contacts situationally and perceptually. The literatures on opinion and taste leaders discuss these more personal reviews. Leaders are personal contacts who are more active and earlier consumers in some

field and act as filterers and recommenders for less involved contacts. The concept was originally discussed in the context of how information on politics diffuses through mass media (Katz et al. 1964). You can just as easily discuss opinion leaders in film and other symbolic markets (Karpik, 2011). Social media allows for celebrities and influencers — those with what McQuarrie (2015) calls "megaphones" — to occupy this role (See also Ki and Kim 2019). Gwyneth Paltrow's *Goop* is only an especially brazen example of how some 'influencers' can combine the 'friend', 'reviewer' and 'celebrity' roles into a consolidated function.

Reviews are a form of curation, but they are not synonymous with it. Not all curators resolve experience uncertainty. Much art criticism is consumed during or after a piece has been inspected. Similarly, not all reviews are curation. If a review does not discuss a product's symbolic characteristics, then it belongs to a separate category than what we are considering in this study. In the case of paper towel absorbency, you can imagine a situation where any performance-related uncertainty is resolved through a series of tests (i.e., "This paper towel is rated on the following types of spills"). Such information is fully knowable because paper towel of a certain make are clones of each other. Whether such information is too expensive to acquire will be decided by the market.

Table 5.1 Forms of Uncertainty Facing the Symbolic Consumer

Form	Definition	Type	Applies To	Purest Curation	Relevant Literature
Subjective	Uncertainty related to polysemic nature of symbolic value	Substantive	All Symbolic Products	Award, Valuation	Stigler and Becker (1977); Caves (2000);
Experience	Uncertainty that only consumption can resolve	Substantive	Most Symbolic Products	Preview, Review, Staged Investment	Nelson (1970); Darby and Karni (1973); Karpik (2011)
Processing	Uncertainty stemming from information processing ability	Procedural	Some Symbolic Products	Lists, Results Pages, Filters	Simon, (1982; 1996)

Curation may lower processing uncertainty.

Processing uncertainty, a form of procedural uncertainty (Simon, 1982), describes a limitation imposed by cognition instead of the market. It is the lack of relevant information about all the products in a market that prevents the consumer from identifying an optimal or even sufficient product. Standard economic theory assumes that the consumer has full information about the market before purchase, but this assumption is regularly violated in practice, and the empirical marketing literature does not give it credence (see Masatlioglu et al. ,2016 for an excellent review).

Symbolic markets can be structured in a way that makes processing uncertainty irrelevant. In the case of academic literature in a cutting-edge field, it is common for the supply of papers and manuscripts to be fully manageable. Similarly, there are jokes about the inane things that small-town newspapers must concoct to cover due to an undersupply of daily events. In both cases, there are too few products for processing uncertainty to be relevant.

We should not have any trouble identifying markets that impose high uncertainty about how far the market extends, let alone the relevant characteristics of all products. In such markets, the sheer amount of choice can be inhibiting. Returning to the academic example, it is common for a scholar to read extensively in an area, only to be told by a reviewer that they have missed key parts of the literature. In this marketplace the literature review can be an academic output unto itself, with some journals publishing these exclusively.

Elsewhere, the goal is to manage processing uncertainty by ensuring that your product is at the 'top of the pile'. High-powered publicity agencies that specialize in 'placing' stories in the *New York Times* or *Sunday Times* demonstrate that New York and London do not have a shortage of news stories, by accepting money to pitch stories on behalf of their clients. In both academic and newspaper publishing, there is an actor who must choose from a supply of symbols that they cannot fully know. The wealth of information in their environment directly causes a "poverty of attention" (Simon, 1996), and their ability to choose correctly depends on their cognitive capacity in addition to their symbolic judgement.

Objectively-differentiated products can be supplied at incomprehensible levels without creating these processing uncertainty problems. The Amazon.com marketplace illustrates this. At the time of

writing, there are apparently some 3,983 television models in the American market, a number that well exceeds 7 — the "magic number" -- the number of items that can be held in working memory at a given time, on average (Mathy and Feldman, 2012; Miller, 1956). We are less worried about the oversupply of televisions than we are about, say, television programming, because in the former case we can use objective features as filters to quickly and cheaply reduce our selection. On Amazon and similar sites, this involves a few clicks that filter the market based on our preferences, until we can make a comfortable choice. In the case of televisions, it takes less than a minute to filter our way from 3,983 models to 5. We get all the benefits of selection without any cognitive pain.

Symbolically-differentiated products cannot be filtered algorithmically because symbols do not have stable inter-subjective meanings. If you are in the market for a certain kind of emotional experience with a cultural artifact, you will be unable to make that a filter. Quasi-stable genre categories do exist in most symbolic markets, but these will rarely bring product selection under a critical processing threshold[22]. Amazon's streaming platform "Amazon Prime" will allow you to search by movie genre and release year, but these alone will not make selection manageable. Curation can intervene in such cases to reduce the extent of the uncertainty in supply characteristics.

There is growing recognition that modern markets impose heightened processing constraints on economic actors. An agent's attention is said to be an increasingly scarce resource that comes to be rationalized and rationed by the wider economic system. The modern condition is sometimes referred to as the "attention economy" (Morgan et al., 2014; Davenport and Beck, 2001). Curation is a key function within this economy, and part of what Duncan and Watts (2004) call a "Market for Preferences". The curator participates in this economy by credibly bounding the consumer's view of the market, so that what they see is assumed to be what they need to see (i.e., 'all the news that's fit to print').

The set of products that is being considered by the agent is known as the consideration set (Masatlioglu et al. 2016). This can be understood as the consumer's model of what products are at market.

[22] There are, surely, cases where the genre category is all a customer needs to know in order to make a decision. However, such customers are not representative of the wider market.

The consumer may know that there are more products available beyond the consideration set, but they will only devote their scarce attention to what is included. A curator lowers processing uncertainty by populating the consideration set and/or convincing the agent that what is in it represents a realistic model of the wider marketplace. This is primarily achieved by providing the client with product lists.

Processing uncertainty is related to what Caves (2000) calls the "A list /B list" list property of creative industries. Producers have a common sense of which symbolic products can be considered among the best, and which producers are inferior but acceptable. In this case, the list operates as a kind of heuristic for a specific industry. Social media platforms also tend to be driven by explicit lists. Here, the main 'feed' almost always resembles a vertical list that has been ranked using a proprietary algorithm. To have a social media experience that is not mediated through such a list, you will usually need to keep the number of input feeds very limited (thereby curating in a different way) and/or change the default settings so that you expose yourself to an amount of information that would be unattractive for most consumers.

Lists of a kind are common across the symbolic economy. Consider the following real-world examples from the product worlds emphasized in this study:

- "Mix of the Day: softcoresoft" (Resident Advisor, 2020)
- "12 Exciting California Cabernets for $40 or Less" (Romano, 2020)
- "Essential California: September 27th" (Wick, 2020)
- "Hot Tech Companies Globally" (Crunchbase, 2020)
- "Course Syllabus" (Ubiquitous)

Curated lists can rely on algorithms or the symbolic judgement of curators. Whether curation will be valuable depends on the ability of the list to connect the agent with satisfactory product choice. Behavioral psychology makes clear that agents are inclined to accept lists of options as given, rather than use Bayesian procedures to adjust their expectations about the quality of those lists (Clark, 2014; Vlaev et al. ,2011). When agents are searching for something from a list, they are inclined to stop as soon as they reach a sufficient solution rather than asses every possible option and select 'the best' (Stein et al. al. 2003). The

market for lists should therefore operate similarly to the market for underlying products. Customers who are satisfied with the products in a list should repeat as list consumers. Whether — and the degree to which — a list is representative of the wider product universe should be of secondary or even negligible concern.

The market for new lists should resemble the market for new products to the extent that both are symbolically-differentiated. The two markets are different in terms of how they are perceived by the agent. Markets for lists must be able to believably claim that they represent the underlying product universe. For algorithms, that claim is usually rooted in processing power. Hence, a search engine usually reveals its power by showing the number of listings it sorted through to give you a result. For human curators, this claim is rooted in knowledge, wisdom, or good taste. The curator knows their way around an area and can steer you to the best or the right list of products. The curator may appear to have more knowledge of the market than they do.

Curation creates information externalities.

We have now seen that the demand for curation originates in three knowledge deficits. When that knowledge is provided, it is a quasi-public good. Knowledge is commonly recognized as a source of production externalities. It is non-rivalrous and ,at most, partially excludable (Romer, 1990; Arrow, 1967). Access to curation can be especially difficult to control. In its pure, "judgement device" (Karpik, 2011) forms (See Table 2.1), curation produces coded and legible facts, which might be more appropriately called information (Braf, 2002; Zack, 1999). Information is transferable well beyond its initial transaction.

The same applies to the wine market. There may not be an ontological basis for judging one wine vintage as good, but if it gets an award, gets placed on a list, or even gets a positive review, then it does become objectively 'good'. The fact that it has been consecrated is widely transmissible and very difficult to exclude from curation's buyers. You do not have to buy Wine Spectator to find out which ports they recommend, and you do not have to watch the Academy Awards (ads and all) to learn who the winners were. Curation is attractive to its consumers because it reduces complex, multidimensional, polysemic products to simple and accessible facts. These facts travel very far at little to no cost.

The same basic logic applies when we consider curation in its less purely informational forms. The sommelier is responsible for buying wine for restaurants and home movie distributors must choose among an oversupply of titles. Each act of curation generates informational signals, and these are not excludable. "Restaurant X has Z new wine in" is just as much a fact as "Wine Z just won an award". What will usually vary between these forms of curation is the degree to which their signals are coded or tacit. Awards and lists are coded because they imply an unmistakable judgement about a product. The meaning of curation practice can be more ambiguous because other curators are not only guided by product quality when they choose products. We should expect much *larger* audiences for pure/coded curation (awards) than for tacit signals from behavior.

Non-Rivalry is the second qualification of public goods. We will come to see that curation is especially non-rival; as with other symbolic systems (David, 1985), there are network effects to curation systems. For now, it is enough to notice that the quality and amount of knowledge that one has when they learn curation does not depreciate when they share it.

Curation Inputs: Symbolic Products, Judgement and Signals

As with any service providers, those who supply curation bring multiple resources to market. Our focus here is on the minimal input requirements needed to perform curation. We ask, "what inputs are combined by curators in order to generate certainty?" Fundamentally, there are only two necessary inputs: an adequate supply of products and the willingness to share symbolic judgement. A third input, prior curation signals, is so common that it might seem like it is necessary to many curators.

Curators need an adequate supply of symbolic products.

Curators must curate among some variety. Margarine, which is symbolically-differentiated, is not curated because it does not meet this condition. As with wine, it is expected that expert tasters will not be able to reliably tell the difference between different margarine brands (Györey et al., 2012). There is such

little selection in margarine relative to wine[23] that a market for information about the best margarine does not really make sense. The margarine product cycle is also very slow, with new brands rarely coming out. Perhaps due to these factors, consumption of household goods like margarine is highly routinized, even transmitted inter-generationally (Moore at al., 2002).

Wine is different. There are more than 3,000 producers of wine in the United States, with the average winery producing multiple varieties per year (Bidmead, 2012), and each year bringing new vintages to review. The curator in this context has so much supply that demand and willingness to pay, not the supply of products, act as the key constraints on their activities. There would never be a "Margarine Monthly" magazine or a "Solid Vegetable Oils" blog, but we find many such examples for wine.

Many curators depend on an ongoing tendency for variety to proliferate in a market to justify their role, the role of a dike that tames the rowdy torrent of variety. We have already seen examples of this. To the extent that professional curation has increased in the past 20 years (Chapter 2), it is largely because of increased selection more than increased symbolic variation.

There are curators who do not relieve experience uncertainty at all, but whose symbolic and experience uncertainty is nonetheless demanded. Reviewers of opera or scientists in a truly new field curate in this way. For them, 'adequate supply' is smaller but still above 1. For there to be curation there must be the specter of overwhelming product choice or a superabundance of complexity facing the consumer or both. We would also expect for small sample curation to be more attractive when the costs of purchase are higher. Opera tickets are expensive; grants for cutting edge scientific research are ever more so. An additional reason why margarine is not curated is that the downside pecuniary risk of bad margarine is not as ruinous as it can be in these other cases.

[23] Explaining this market structure is well within the capability of Salop-style or Dixit-Stiglitz models. Those models would assume that consumers prefer more kinds of margarine than they can have, because barriers to entry (capital, scientific) are high. For instance, as an ethical consumer I might only want margarine that has been manufactured by non-racists, but the size of that market would not be large enough to offset the fixed and marginal costs of production.

Curators need to be willing to share their symbolic judgements.

Curation is rooted in the curator's sense of the value attached to a symbolic product or products. The curator must be willing to share this judgement. Given that the underlying ontological basis of symbolic value is unsteady, the curator's willingness to designate symbolic products as valuable means that they can project confidence about fundamentally unstable knowledge. Because symbolic taste is also bound up with personal status, and emotions, curators must also have a form of extraversion. There are many service providers — many information workers even — who can get by at work without sharing their personal judgements, but curators cannot. Confidence is a necessary quality of curatorial labor, and a form of human capital (Becker, 1970).

The sex advice columnist Dan Savage is fond of saying, "The only qualification you need to give someone your advice is that the idiot was fool enough to ask you for it." (Eisenberg, 2015). The requirements to be a curator are even less imposing. Curators need products and assertive self-confidence to issue their curation. Confidence is, naturally, an insufficient condition for successful curation. To be successful, there must be some coordination between the curator's self-regard and the market's regard for their judgment. Nonetheless, the curator must necessarily bring a level of confidence to market.

Curation signals are commonly inputs into curation.

Curation usually includes curation informational signals (i.e., the non-excludable portion of prior curation) as inputs. Per above, the market for curation revolves around uncertainty and not originality. The main dilemma to be resolved is a lack of knowledge about quality. Therefore, we should expect curators, who are themselves subject to the three uncertainties, to value the curation signals of peers when providing symbolic judgements, and to be willing to incorporate these into their decisions.

It is possible to curate without relying on prior curation, but this is uncommon. Unsupported curation is most tenable in the opera/cutting edge knowledge/small town news type examples referred to above, where processing uncertainty is minimal. In the presence of overwhelming supply, an unaided approach would require the curator to randomly sample the underlying product universe to relieve

processing uncertainty and form a consideration set. The wine reviewer could randomly identify wineries from a public registry and review what he finds there. Even in this situation, the degree to which an evaluation is unaided will be highly dependent on referents (Kahneman and Miller, 1986) which might themselves be influenced by curation at some point in the curator's experience.

Most curators leverage the free signals that they get elsewhere. Here are just a few examples of how curators in our featured industries use the outputs of others as inputs into their own services:

- A newspaper's film reviewer attends the Toronto International Film Festival, and their next 10 reviews are films that they discovered there.
- A restaurant sommelier only buys wines that have scored 90 or higher in Robert Parker's wine guide.
- A venture capital investor only invests in the second stage of a funding raise.
- A social media influencer only reshares content from verified accounts.
- A newspaper editor tends to put award-winning reporters on the front page of the physical edition.
- A scholar cites a book without reading it; they have only read the book's review, and/or verified the prestige of the author or publisher.

Each of these practices is highly plausible if not common among successful curators. For none is there much worry that the curator is spending too much time or money on prior curation or surrendering their market position as a provider of an uncertainty-producing service. The curator is always combining their own judgement with the judgement of others and is usually synthesizing across many sources to create a unique mixture of others' judgements. Prior curation is recruited as a heuristic aid.

Matt Drudge's *Drudge Report* has no original content and only links to news stories, but it is nonetheless a highly original and successful digest of the news of the day (usually more popular than the sources it links to), and one of the world's 1,000 most visited sites (Alexa, 2020). It achieves originality by aggregating enough different resources. Despite its success, and many attempts, it has not been equaled as a aggregator of news links.

Curation can sometimes resemble arbitrage, where the curator brings nothing to production beyond a favorable network position between prior curation signals and some wider audience (Burt, 2004). Imagine a nightclub, with an older and musically 'out of touch' management that is not convinced it needs to pay a DJ each night. Here, there may be an opportunity for some somewhat knowledgeable employee to volunteer as music programmer and simply play from a Resident Advisor list each night.

These examples demonstrate that prior curation information signals are mostly complementary to curation production. In markets where true symbolic value cannot be ascertained, and where uncertainties related to experience and information processing are common, the judgement of other curators can help a curator to differentiate between products that will turn out to be duds and those that may make them seem like savants.

Then again, a curator is prevented by normal constraints from becoming a complete glutton for prior curation. Curation inputs are costly; they require time and attention to consume and will sometimes command a share of the curator's budget. They also demand a degree of curatorial power from the consuming curator. Structural holes do exist in curation networks but when a curator is competing in an open market with the curator that they mimic, then the signal adopter will tend to be slower and more resource-constrained than the signal creator, and ultimately at a competitive disadvantage. We should expect for curators with larger budgets to consume more curation signals and to be slower, and for curators with fewer resources to be less productive and more independent. The next section considers how different kinds of curators may join to form an input/output structure.

III Curators Agglomerate to Reduce Uncertainty

This section anticipates the economic geography of curation, given the understanding that curators add value by reducing uncertainty. How do curators locate so that they can minimize uncertainty for their clients? This is the crucial concern for economic geographers and planners, but it is also of obvious importance to how symbolic industries operate in the face of an uncertain economic environment.

The main argument here is that the productivity of curators is closely linked to their location. The agglomeration of curators among themselves and among symbolic producers will lead to more client confidence about how symbolic products are valued. The decisions of Richard Lovett and Fleetwood Mac to move to Los Angeles can be related to these advantages. Los Angeles is also a center of meaning making in fields like design, fashion, gaming, and social media. Elsewhere, we find centers of meaning in other domains that draw curators and producers — including fashion (Milan), winemaking (Bordeaux), country music (Nashville), venture capital (San Francisco), musical theater and finance (New York), public policy (Washington D.C., Brussels), and experimental physics (Santa Fe, Geneva). It is not a coincidence that symbolic products tend to have centers of production and tastemaking, places where 'the action' is—this feature improves productivity.

The literature on agglomeration economies is vast and well-reviewed elsewhere (Duranton and Puga, 2004; Rosenthal and Strange, 2004). There has been less discussion of the specifics of agglomeration economies in the creative industries, or of the causes of agglomeration in curation activities. Both are discussed here. While the overall argument is newer, many of its constituent elements are drawn from previous findings in sociology, economics, and geography.

The top left box of Figure 5.1 depicts a consumer or downstream curator. In the wine example, this would either be a household or a buyer (chef, cruise director, retailer). The consumer is likely to reduce their uncertainty by relying on curatorial judgement of any sort — as the discussion in Section I makes clear, along with, independently, Karpik's (2011) work on judgement devices, Caves' (2000) work on A/B lists, Akerlof's discussion of brands, and Katz et al.'s (1964) of opinion leaders. The set of mechanisms through which the production of curation services lowers symbolic uncertainty is collectively referred to as Sequence A in this figure. This is the 'on the head of a pin', non-geographical, version of value-adding through curation. It suggests that curators randomly distributed across a market will be just as effective as those who are organized in 'creative cities' or scenes. The balance of this section describes why agglomerated curation would be more effective at reducing uncertainty than curation produced outside of localized symbolic production systems.

In any discussion of agglomeration, it is important to clarify the relevant spatial scale. Here, a region is an area over which a preponderance of workers commute between home and work and regularly obtain services — in other words, a functional urban region (Skinner et al., 2013). The geographic unit of analysis is a localized production system, which can be understood from the supply side as the division of labor that supports symbolic production of a given product in each region. From the demand side, this system is the common labor market for symbolic producers. The curation cluster contains both curators and producers of symbolic content, who are all said to be brought together by (at least) five forms of agglomeration benefits. All five will be reviewed. We will begin with agglomeration mechanisms that are most recognizable from the vantage point of established theory and proceed to relatively novel rationales that are only relevant in the context of symbolic production.

Lower Curation Input Costs

Curation is like many other functions in the modern economy in that it is intensive in knowledge inputs — in this case, the curation signals of other curators. It is subject to localized increasing returns because local scale allows for curators to economize on this factor[24]. Curation signals have key distance-sensitive trade costs (Brakman et al., 2009; Fujita et al., 1999; Krugman and Venables, 1995; Krugman, 1991; 1990).

New Economic Geography (NEG) models embed the Dixit Stiglitz (1977) monopolistic competition model in a 2-dimensional world and determine the conditions under which agglomeration is viable. A recurring lesson from the NEG literature is that agglomeration will be preferable (subject to other parameters) at some intermediate level of trade costs. When trade costs are zero, firms gain nothing by locating together, because every location is identical. When they are very high, the benefits of trade cannot compensate for the costs of administering it (Neary, 2001). In between, agglomeration of production will allow the entire system to lower total trade costs, because it allows for more trade to occur within a smaller area.

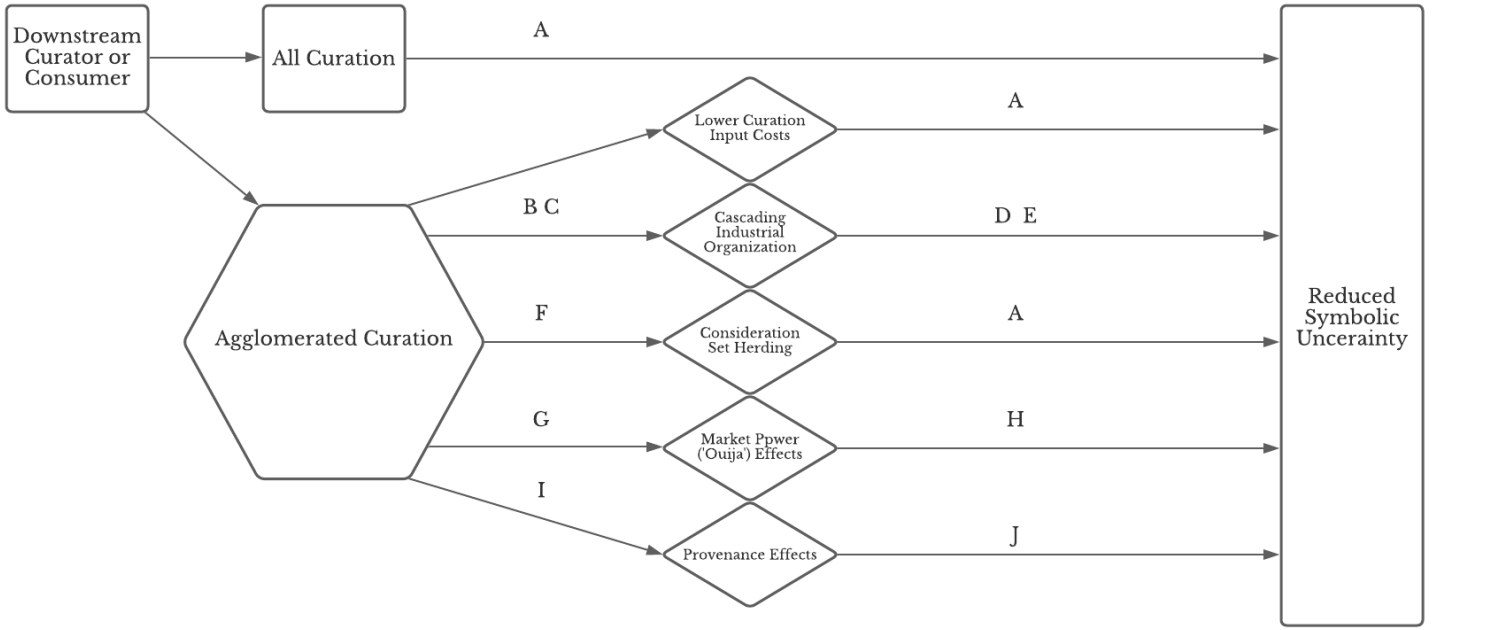
[24] We will withhold analysis about how the other key inputs (curated products, human capital) might similarly be economized, because I believe these to be less central to the motivation to agglomerate.

Curation inputs are often but not universally sensitive to distance. The "symbolic knowledge base" perspective, originating with Asheim (2007) and widely endorsed (Davids and Frenken, 2017; Martin and Moodyson, 2013; Gertler, 2008), emphasizes this point:

> "knowledge production and exchange among actors to be most geographically localized in symbolic-knowledge-based industries, less so in synthetic-knowledge-based industries, and even less so in analytical-knowledge-based industries" (Davids and Frenken, 2017: 25).

Symbols are said to rely on their local context to be interpreted. Picking up on 'the right' symbolic meaning depends largely on "being there" (Gertler, 1995) among actors who embody and reenact these meanings. Symbols, then, are subject to positive trade costs by virtue of their tacitness.

Figure 5.1 Agglomeration Economies in Curation



Agglomeration Benefits In Brief

Lower Curation Input Costs: Closer curation is cheaper
Cascading Industrial Organization: The industrial system can resemble a cascade
Consideration Set Herding: Choice sets are more alligned
Market Power: Curators have more tastemaking power
Provenance Effects: The region of curation commands a symbolic value

Relevant Literature

A Karpik, 2010; Caves, 2000; Akerlof, 1970; Katz et al., 1964
B Fujita et al.,1999; Krugman and Venables, 1995; Krugman 1991, 1980
C Asheim, 2007; Storper and Venables, 2004; Powell 1990
D Becker 1982; Hirsch, 1972
E Banerjee, 1992; Bikachandri et al., 1992
F Maskell and Malmberg,2006; Lawson and Lorenz, 1999; North, 1990
G Silver and Clark,2016; Wohl, 2015; Ross and Nisbitt, 2011
H Salganik et al., 2006; Adler, 1985
I Molotch, 2002
J Cross et al. 2011; Ashenfelter, 2008

Such a view is partially compatible with the model described here. We have seen that there are highly codified forms of symbolic knowledge that do not rely on local context to be read, including the 'pure' forms of curation in Table 2.1. Lists, awards, valuations and recommendations are highly codified forms of symbolic knowledge that, in the words of Rekers (2016), "travel well". The meaning of an "Academy Award Winning" film is largely the same in Lubbock or Brussels as is it is in Los Angeles. Similarly, even if you are not familiar with the Parker guide for wine, you can figure out how it works without sinking too much time or attention.

However, the production of these pure signals does tend to come from locally embedded agents and organizations. The Academy of Motion Picture Arts and Sciences (which decides the Academy Awards) is overwhelmingly made up of Los Angeles-based voters, according to a 2012 LA Times study (Tartar, 2012), and voting-related events like screenings and publicity events are also based here. What is more, the 'buzz' of who will or should win an Academy Award often takes the form of face-to-face communication, or at least private exchanges that are neither widely accessible nor necessarily widely interpretable. This extends, of course, to temporary clusters in the form of film festivals that recreate the highly localized conditions of theory in, say, Toronto or Venice or Park City (Cevernan, 2017).

The technological advantages of local exchange of less codified information have been the subject of inquiry in economics, geography, and sociology. In their 2004 paper, Storper and Venables set out the advantages of the face-to-face (F2F) medium, which they refer to as Buzz, as a communication technology. Face to Face allows for a richer exchange of information (e.g., both non-verbal and verbal signals) and faster feedback. It also promotes trust and stimulates hormonal reactions — 'rush' — that make participants do better as participants. All of these would apply to, say, a group of Academy members discussing a film at dinner before voting on it.

Similarly, personal networks are efficient caches for tacit knowledge and information. Powell (1990) suggests that information is more multifaceted ("thicker") when stored in a network than in an organization, and also "freer" — easier to trust. Jones et al. (1997) make a similar observation about organizational networks. Networks are in turn maintained through locally-inflected communication and activity links.

Research on the geography of venture capital funding echoes the idea that F2F communication matters for early-stage investors. We have seen that one way for VC investors to lower experience uncertainty is to use the signals from earlier investors as inputs and join at a later stage. Chen and colleagues attest to this strategy (2010), showing that later-stage success rates are generally higher than early-stage rates. However, we would not expect early-stage investors to forego curation inputs altogether, given their own uncertainty. Indications are that they lower uncertainty through the acquisition of local and more tacit knowledge. Powell and colleagues (2002) find that early biotech investment is more likely to come from nearby sources, attributing this to the localized nature of learning in the VC context, including face-to-face communication. In a similar cross-sectoral study, Cumming and Dai (2010) find that VC investment is more localized in the first stage and when the investor is acting alone. In this case, early curation seems to rely more on the technology of local communication. Generally, we would expect to find clusters of curators and producers, exchanging less codified/pure information early in a product's curation.

The unity of "New Economic Geography" (agglomeration lowers trade costs) and "buzz" (F2F is a superior technology of exchange) leads us to a well-founded hypothesis for why curators cluster. In general, there will be co-location to lower distance-sensitive trade costs. Areas of the economy with high communication-related trade costs will gain relatively more from co-location because it lowers uncertainty to communication. Because of their polysemic and fluid nature, symbolic products gain from F2F communication and reward clustering.

Cascading Industrial Organization

The next microfoundation relates to early-stage curators operating within local industrial systems. The benefits of F2F/Buzz draw them into clusters, but once there, how are they assigned to *relatively* early and late curation sequences? We can imagine two ideal configurations. Curators in a cluster may be interchangeable, with who curates first being random. Alternately, there may be a structural division of labor that slots some workers, organizations, and divisions into earlier where they have less access to curation inputs. Sequence-based divisions of labor are prominent across 'curation economy', as this section makes clear. In fact, access to a mix of early and late curators is an advantage of curation clusters.

The industrial organization of curation already figures into the sociology of culture. Becker (1982) chronicles the deep division of labor in complexes that he calls "Art Worlds", writing:

> The division of labor does not require that all the people involved in producing the art object be under the same roof, like assembly-line workers, or even that they be alive at the same time. It only requires that the work of making the object or performance rely on that person performing that activity **at the appropriate time** (p. 13, emphasis added).

Becker's focus on the "production of culture" through networks of producers is credited with changing how cultural industries are studied in sociology (Peterson and Anand, 2004). One aspect of his original theory that is sometimes lost in modern recitations is that the social system is responsible for valuation itself. As he says later, "Art worlds produce works and also give them aesthetic value" (p.39).

Hirsch (2000, 1972) proposes that cultural industries organize to manage (what are called here) symbolic and processing uncertainty. He sees an "industrial system" that winnows a large selection of cultural products down to a market-ready selection through sequential curation by different kinds of actors. At the boundary between the artistic output and the corporate firm, there are "contact men" who act as selectors of the most valuable talent. Downstream, there is a similar frontier between the organization and retailers and again between the retailers and consumers. In the language of this thesis, the "contact men" are all curators. Hirsch's theory emphasizes that processing of creative products through the social system is a separate and important aspect of creative production. He observes that curation is administered through the same recurring system. Scouts are always earlier than wholesales reps, who are always earlier than consumer surrogates. The filtering property of such a system directly lowers experience uncertainty as a large variety of products becomes few[25]. At each key juncture, the intermediary deploys symbolic judgement to separate high value selections from passed over also-rans.

The Hirschian system shares the properties of efficient information structures recognized elsewhere. The non-excludable portion of curation—that is the signal of product quality-- can be inexpensively assimilated into another curator's production function. This property means that curation

[25] Hirsch proposes that there will be "overproduction" at each phase of the process as a strategy to manage uncertainty. This is not necessarily inconsistent with the present view, because net variety does reduce over time in his model.

relays can form, in a manner resembling an electronic circuit or (more relevantly) an information cascade. The information cascade literature dates to two contemporaneous pieces from Bikachandani and colleagues (1992) and Banerjee (1992), which discuss herding as a response to uncertainty. In these models, there are multiple agents who must decide sequentially between adopting or rejecting some behavior. Each agent has private but incomplete information about whether they should adopt the behavior and is also (crucially) aware of their ignorance. Therefore, all agents after Agent 1 will weigh their own information about the behavior against the signals sent by the previous agent. As agents make later and later decisions, they will discount their private information more in a manner consistent with Bayes Law. Earlier in a sequence, it is relatively easy to ignore prior signals and defer to private information, but at some point, the agent will fully ignore their own private information and go with the 'wisdom of the crowd'.

'Fads', which are fundamentally just fast and popular consumption decisions, can be explained on the basis that later adopters assume that prior actors 'know what they're talking about'. If the early information in a sequence is in fact 'good'[26], then the sequence can be a more efficient medium for processing curation, an information system that, in the terms of information theorist Claude Shannon (1948), has less entropy[27]. Anderson and Holt (1997) find that rational cascades occur in most cases in a laboratory environment. Early agents, who are less susceptible to crowd signals, tend to filter out the good signals and ensure that cascades economize on good communication.

There is evidence that individual expertise helps to improve the quality of information in cascades. Alevy and colleagues (2007) compare cascades formed by Chicago Board of Trade members to a student control group, finding that the professionals are better able to differentiate among the quality of earlier signals. Stevenson and colleagues (2019) show that amateur venture crowdfunders rely on the quality of early signals to produce rational informational relays. Furthermore, agents with stronger self-belief are found to trust the crowd more, to their eventual regret. For our purposes, it is notable that in these studies, the mostly agglomerated Chicago group did well, and the online group of crowd investors did not. And while

[27] Entropy and uncertainty are synonymous in this framework.

these studies do not draw any conclusions about geography, it appears that cascades (good or bad) will form more among agglomerated agents, for at least two reasons:

- First, when the costs of communication are lower, there will be more of it and more opportunities for cascades to form. For reasons we have already seen, communication is faster and fuller when it can be transmitted F2F.
- Second, for the reasons described in Storper and Venables (2004), trust is higher in clusters (see also Lorenzen, 2016), and this is relevant because cascades can theoretically be weaponized to damage other agents. You are less likely to maliciously exploit cascades and rumor mills if you are subject to F2F monitoring, or if the local industrial system generally puts you and your competitor in repeated exchanges.

When cascades rely on good early information (information that will come to lead to valuable products), cascades *can* be efficient informational structures, and to the extent that they are, they are more easily administered in localized industrial systems. In Hollywood and Silicon Valley and so many other centers of symbolic evaluation, there are local divisions of labor (e.g., scouts, first wave investors) who absorb higher uncertainty on behalf of downstream agents who are closer to the final consumer. This pattern is consistent with the hypothesis that agents agglomerate to gain productivity benefits. Consistent with Duranton and Puga's (2003) "Sharing, Matching and Learning" formulation, cascades allow for clusters of curators to 'share' the information processing of early curators and learn on a faster basis.

Cascades can also be ruinous for individuals or even regions. Bubbles, panics, runs and other undesirable collective behaviors can be explained as cascades that form around bad initial information. Hollywood studios commonly make two movies with the same unlikely concept (volcano, asteroid, mall cop movie, Roger Ailes movie), surely in part because their makers belong to the same localized cascade. Cascades may therefore be both an agglomeration economy, and a looming threat (like a volcano or asteroid) to the survival of the industrial system. If the cascade results in high enough bets on bad enough products, then the routine benefits of cascade would be moot.

Consideration Set Herding

We have seen that the supply of products and product information is often so large as to be unknowable, using the concept of processing uncertainty to describe the state of being overwhelmed by choice. Counter to the traditional economic model, which has at its center a perfect processor of market information, we have established that agents instead create "consideration sets" consumer heuristics that reduce the unknowable market into a knowable array of options.

An "A/B list" (Caves, 2001) is essentially a consideration set that is shared at the production system level. Creative fields are said to have some common agreement on what products are worth knowing about. Returning to our domains of emphasis we can imagine the following examples of 'Industrialized A/B lists":

- The number of eligible pieces considered for a Pulitzer Prize by each committee member overlaps.
- The Sommelier and Restaurant Manager are familiar with all the vineyards that are being considered for a wine pairing list.
- Rival venture capitalists pitch the same set of later stage investors (and later stage investors are pitched by the same set of early ventures)
- Social media subscriber networks largely overlap within an organizational field.
- Scholars in a field read pre-prints from the same overlapping set of researchers, rejecting pre-prints from less establish authors.

Common vocabularies, or what North (1990) calls a "language-based conceptual framework for encoding and interpreting the information that senses are presenting to the brain" (p.37) are versions of social heuristics-- elsewhere recognized as useful shortcuts for local production systems (Beamish and Biggart, 2011; Jones et al. 1997).

Like curation itself, the consideration set can be highly coded (e.g., NASDAQ-listed company, American Songbook Song) or the kind of understanding that would have to be discovered through study and communicated face-to-face. Either way it functions to coordinate economic behavior. The consideration set is somewhat different from the communication inputs already discussed, because it is more akin to a rule that the market operates under (i.e., an institution or convention), than a variable cost.

Consideration set formation should also be improved through localization, if only because other market rules are spatially organized. Languages are locally organized, not just at the national but at the regional level. Dialects are in fact not inherited by parents and tend to be formed through (localized) peer interaction (Richerson and Boyd, 2008). Local industrial systems are themselves recognized to have distinct language systems, usually not at the level of formal language rules, but certainly in terms of vocabulary and mental models (Maskell and Malmberg, 2006; Bathelt et al., 2004; Lawson and Lorenz, 1999).

Like language, we should expect herding around a common set of products to be reinforced by ongoing localized routines. The personal network, which is a major curatorial filter (e.g., Katz et al., 1964) is localized. Mass media has a local component both in terms of regionally specialized media sources like local newspapers and in locally varying digital search results (Ballatore et al., 2017). Access to different knowledge infrastructures (universities, schools, libraries) and different kinds of knowledge 'ecosystems' (based on industry, anchor dependency) will inevitably give consideration sets a local character. Finally, the availability of products and services is largely local anyway. Each local economy has a set of products, including symbolic products, that will help to pattern what is in the consideration set.

As is the case with cascades, the efficiency of consideration set herding is not unambiguous. Shared consideration sets can have blind spots, and blind spots can put the entire industrial system at a disadvantage at market if competitors are not similarly constrained. This can happen in cultural fields with overly fortified canons. The Nashville-based Country music system did not recognize the more western 'Bakersfield Sound' as legitimate (Coe, 2017), and therefore did not recoup the proceeds from its massive success. Early hip hop music was popular among New York's young black community but not recognized as legitimate by the industry until long after independent Sugar Hill Records was formed in 1979 (Charnas, 2010). From a modern perspective, it would have been better if the folk music system had recognized Dylan's electric music as part of its own tradition.

The efficiency maximizing concordance level for consideration sets (if such a point exists) would likely be less than 100%. A degree of mismatch in consideration sets will allow more inputs into the system,

prompting learning, discovery and ultimately innovation. Still, the benefits of having somewhat common consideration sets appear to be substantial, based on the persistence of A/B list arrangements.

Market Power ('Ouija') Effects

Local production systems may determine how the market values symbolic products. Curation is colloquially described as tastemaking, implying that the curator determines what the market likes (as opposed to merely anticipating its preferences). This is credible given the established tendency of curator's to rely on prior signals. For example, the designation of a product to an 'A list' is a strong signal that the customer should at least consider liking it, and the designation of a product as 'best' or 'right' or 'hand-picked' is even more powerful. Since symbolic preferences depend more on inter-subjective and situational conditions than they do universal laws, it is easy to accept that curators possess a degree of sovereign power simply because they can nudge ambivalent, time-constrained, and attention-constrained consumers in a certain direction. Here, tastemaking power is described in its sovereign and industrial forms.

Sovereign Tastemaking Power

In pre-industrial times, sovereign curation—curation by fiat-- came from sovereigns themselves. Royal courts would pattern the consumption of the wider aristocracy and middle class, sometimes in amusingly arbitrary ways. Henry VIII's reign saw the ascendance of Tudor fashion and portraiture as an artistic medium (Weir, 2010). The practice of wearing wigs originated in the courts of Louis XIII and XIV and diffused thereafter across Europe and the Americas (Kwass, 2006). The Medici are credited with driving the production of Italian renaissance art with their sponsorship. Under patronage systems, the curator's signals are so strong that they can make markets by themselves. The information cascade sets in immediately.

Patronage survives in the modern economy, but patrons do not have the same total influence over subsequent adopters/adoption. It is no longer the case that prominent consumers commission the production of symbolic products. These actors tend to enter the production system later, perhaps as endorsers of products that have already been developed, or upstream as purchase recommenders for the

producing firm (e.g., when the interest of respected venture capitalist in a firm sets off a bidding war). The dual role of product commissioner and market intermediary has mostly branched into multiple specialized roles. Specialization has also occurred at the product level. The product universe over which each curator or celebrity presides has narrowed. Celebrity endorsers of fashion do not usually have the same influence on furniture markets.

Coordination and Tastemaking Power

Unlike in the medieval court, modern curators do not have complete monopolies on attention and judgement, and their decisions are subject to market tests. There is a secondary "market for preferences" (Earl and Potts, 2004), which allocates curation to consumers. Consumer-facing curators will lose audience and legitimacy if they start to recommend unsatisfying products. They are free to suggest powdered wigs but are unlikely to do so because wigs would be immediately rejected by consumers. Farther upstream, the legitimacy of producer-curation will be rejected if it is revealed to not be in sync with the market. The Zara executive who greenlights a powdered wig order will have to answer for their sales figures. As a rule, there is no sovereign tastemaking power in the modern industrial economy.

The situation changes considerably when we shift the unit of analysis from an individual curator to the entire industrial system and imagine a system that coordinates value judgements and consideration sets. When the industrial system can muster agreement on what is good, they may be able to jointly cobble together the equivalent of sovereign power. There is reason to believe that consumers prefer to herd around *some* superstar product, and that the designation of a superstar product can be somewhat arbitrary.

In Adler's (1985) revision to Rosen's (1981) superstar product model, superstar products are especially attractive to customers. Rosen had proposed that if a good can be easily reproduced at no or low marginal cost, the market for the good will tend to disproportionately reward the producers who are judged to be the best relative to their level of talent. Under these conditions, lesser talent is a poor substitute for greater talent, so the market tends to (assuming constant tastes) value the slightly better good. Consumers do not want to 'settle' for second best if they do not have to, and in an array of symbolically-intensive

industries including film, fashion, web publishing, television, celebrity, 'the best' producer commands super-normal returns.

Adler (1985) models superstardom *in the absence* of talent differences among producers using network externalities. If you gain utility not only from consuming the product but from discussing it with other consumers, then there will be a tendency toward superstardom because superstar products will have lower average search costs. This is a watercooler effect. If you consume, at least in part, to have something to discuss around the watercooler, then having a superstar is important. It can be better to have a lesser product that you can discuss with your friends then to have a superior product that no one else has heard about. The superstar market structure is unfriendly to producers and very helpful to consumers.

Salganik and colleagues (2006) show that curation can turn the mediocre product good. They construct a digital music market and observe how many times a song is downloaded under varying degrees of social influence. Social influence takes the form of randomly determined lists of previously downloaded songs, visualized either in an unranked rectangular box (light social influence) or a ranked list. Lo and behold, there tends to be more superstardom as social influence increases, in line with the Adler model. Moreover, the 'true quality' of music (i.e., a song's popularity under the null condition) only correctly predicts downloads by the experimental group in extreme cases: "the best songs rarely did poorly, and the worst songs rarely did well" (p.856).

These discussions of quality in creative markets indicate that it is endogenous to curation upstream, that is earlier signals about quality can create quality. One curator may have limited signal power in the modern economy but if an industrial system is able to reach some degree of agreement, then very strong social signals are possible, and those signals can come to make products good. If the signals are sufficiently strong, sufficiently early, and apparently coordinated then tastemaking is contemplable.

Herding of evaluation is akin but not equivalent to cartelization. Textbook cartels seek to manipulate market prices through collusion on output levels (Carlton and Perloff, 2005), which is obviously different than in this case; and cartels are unstable and harder to maintain among a large group of

producers. It strains credulity to think that an industrial system like Wall Street or Bollywood belongs in the same analytic category as OPEC. Collusion based on taste is not as mechanically straightforward because curators and producers, as a matter of behavior, tend to strongly hold their valuations[28].

Institutional arrangements provide credible mechanisms for taste coordination in the absence of outright collusion. Co-financing of symbolic products, as is prominent in modern VC and film industries, or was the case in 18th century printing, is an obvious arrangement where independent curators come together in a contractual setting to agree on a common valuation. Co-financer 1 and Co-financer 2 cannot just represent as though they like a company to inflate its price. They must put their skin in the game. And once both have locked in a valuation, there is then a stronger signal about the value of a product than there would have been under solo-financing. When implemented (e.g. in Google search advertising), second-price auctions impose herding of valuation on markets. The winning bid ends up paying only a fraction more than the second-highest bid, even if the individual valuations are far apart (Varian, 2020)[29]. Such systems are not universal among symbolically-differentiated products or even within the industries they are found. They need not be for curation signals to be coordinated because there are three additional routes by which curators might come to set the terms of the market. These are generalizable across the world of curated products.

First, the sheer number of curated products guarantees that agreement will occur randomly. Let us imagine a strictly randomized world where each early curation signal is independently generated. Every product is randomly selected by a curator, reviewed, and passed on to the next curator if they have been endorsed. This is the non-Bayesian version of an information cascade. If 5% of products are endorsed by each curator, then a lucky random product would make it to the fifth curator every 500,000 times and the sixth every 4 million times. In such a case, what appears to be curatorial agreement would in fact be random

[28] Caves' (2001) concept of "Art for Art's Sake" is relevant here. Creative participants tend to be aligned enough to non-pecuniary values like authenticity that it is hard to imagine creative production systems engaging in 'Taste-Fixing' at the level of the organizational field.
[29] There can also be collusion within the second-price environment. See Krishna (2010:166).

statistical noise. These large numbers are not so large in the context of creative industries. 3 million ISBN numbers are registered in the US a year (WIPO, 2018) and perhaps 40,000 songs are added to Spotify a day (Music Business Worldwide, 2019).

The common consideration sets discussed in the prior section are their own form of coordination device. If these operate sufficiently early and with sufficient strength, then they might serve to shape tastes. For example, once the popular music production system agrees that there is an "American Songbook" that contains the most important pop songs from the early 20th century, then this consideration set will affect how consumers and producers will subsequently value songs collected and excluded from the list. Finally, coordination of tastes could simply be a function of belonging to the same localized social system, a premise that requires its own subsection to unpack.

Localization and Correlated Tastes

At an intuitive level we know that symbolic tastes are highly spatially correlated. Croissants in Mexico are sweeter than in France and can be judged as 'too sweet' by the French palate. The French comedic taste celebrates the saccharin stylings of Jerry Lewis, possibly seeing his work as transgressive (Poirier, 2017), but the Lewis schtick is agreed to be unsubtle and embarrassing in Lewis' home country. Pierre Bourdieu notes that while golf denotes nobility in France, its identical copy in Japan does not, and indeed the martial arts are more analogous to golf in terms of social standing (Bourdieu et al., 1991). Sushi in Japan is more of a casual/recreational food and in the US is more high-end and cosmopolitan. North and Stevenson (2013) show that region, and not socioeconomic status, predicts how music is used (i.e., for mood management, pleasing others, creating an impression).

Local taste patterns appear to be linked to how tastes form to begin with. In his *Critique of the Power of Judgement* (2000), Kant forwarded the concept of a common aesthetic taste. Aesthetic judgement was to be discovered on an individual basis, but also needed to be communicable to others as though it was commonly shared by an imagined community. Arendt (1977) revised this to suggest that it is real communities, with insiders and outsiders, which come to be the basis for judgement; we come to

understand aesthetic value in relation to the community that we are part of. Wohl (2016) extends the latter view, using results from a study of a New York erotic photography scene. She shows that aesthetic taste can be the basis of community formation, forged through close contact and negotiation among members. Here, tastes come to define communities, which in turn end up acting as structures for defining common sense.

Across each of these perspectives there is agreement that the community precedes aesthetic values. Community embeddedness is central in the formation of tastes. This implies that curators who are joined to the same industrial systems will have correlated aesthetic judgement at the level of perception and cognition. Whatever their strategic imperatives, they will tend to approach the same set of symbols with similar priors.

The community in "community sense" need not necessarily be mappable onto territories. There are transnational ethnic communities, there are fan communities for just about every major television show or movie, there are multinational political movements and so on. Geographical proximity does, however, tend to foster community formation enough that we can speak of a constituent "local community sense" (Storper, 2005).

The built form of cities can play a part in community formation. Silver and Clark (2016) argue that aesthetics and the local environment reinforce each other in cities. Our preferences for certain services and institutions may inscribe themselves in our environment in a way that is imagined by economic theory, but they are also reified through the environment. They appear back to us as situational stimuli, anchors, and cues which in turn pattern how we understand our preferences (Ross and Nisbett, 2011). To the extent that each place has unique combinations of amenities and people — its own urban genome (Silver et al., 2019) — these processes will result in spatially varying aesthetic sensibilities.

By integrating the previous perspectives, we can conclude that:

a) symbolic judgement will be spatially correlated, absent any overt coordination, and
b) a high degree of curator coordination on what to value and what to consider can be economically beneficial for the coordinated parties, whatever its origin

Putting these propositions together, we can recognize that curators might exert control over what the market values if enough of them are spatially concentrated; if there is enough comedic curatorial power concentrated in Paris, then Jerry Lewis might have a shot at being funny. In this way, curation is very similar to the operation of a Ouija board. A Ouija board is a device with the physical dimensions and craftsmanship of a board game that promises players an opportunity to speak to the spirit world. It includes a board with letters, numbers, and words, alongside a translucent piece — a *planchette* — set on wheels that can move around the board and highlight the letters. The seance requires that the game's players each touch the planchette to summon the spirits. Once they do this, they will begin to converse with famous ghosts, dearly departed pets and loved ones. What appears to be a supernatural dialogue is triggered by the unconscious collective movements of the human players (Heap, 2002). The players *effectively* conspire to trick themselves into believing that they can communicate with the dead, without any overt coordination. They are not conduits for magic — as the back of the box proclaims, they are the magic.

So, it is with tastemaking. Without realizing it, systems of huddled actors decide symbolic value, and influence how the wider market does this. The more players in this system, the more powerful its magical market pull will be. A powdered wig or a slapstick comedic style, may not have much potential on its own merits, but if enough early actors decide that is good, then it might become a hit. Per Salganik et al. (2006) we should acknowledge that there are limits to tastemaking ability, but the agglomeration of curators may well be enough to make a mediocre product good.

Provenance Effects

Finally, the clustering of symbolic production and curation into the same value-making centers can generate branding-type benefits for products and services from those centers.

Geographical origin is itself a form of symbolic differentiation, sometimes appearing in markets that are not otherwise symbolically oriented. Molotch (2002) argues that the very form of performance-based products like cars and computers is imbued with where they come from. Similarly, 'German engineering'

and 'Italian olive oil' are allegedly of higher quality. Such relatively benign cultural stereotypes surely affect how markets operate, even if the knowledge that they are based on has long past expired.

Provenance should be especially relevant for symbolically-differentiated products because there are fewer objective or extrinsic parameters to override it. In the market for televisions, a purported 'Korean sophistication' may drive consumers to Samsung, but the reputation will not survive if companies like Samsung fall behind the innovation frontier. On the other hand, the market for Gochujang (a Korean chile paste) will always probably attach a premium to Korean brands, even if the quality of overseas brands reaches the same standard. As Hermann and Teuber (2011) conclude, geographically differentiated products will either be valued because they provide quality information (i.e., as a judgement device) or because of ethno-specific tastes. In each case, the symbolic quality is more important when it cannot be superseded by performance.

The value of provenance is a main topic in wine economics. All wines above the very bottom of the market arrive to the buyer with some indication of where they come from — that is, their terroir. The specific ecosystem that wine comes from, including the soil, the humidity, and the elevation, is said to influence the character of the wine. Hedonic regression estimates, which purport to disaggregate wine prices by wine features, bear this out, showing that fluctuations in wine prices can be explained by changes in weather conditions. However, substantial variations remain even once these objective qualities have been considered, suggesting that the idea of terroir—provenance—matters over and above terroir itself. Ashenfelter's (2008) Bordeaux wine study finds that the reputation of the château producing a wine will affect its price. Cross and colleagues (2013) study prices for Oregon wines, and show that the micro-region in which a wine is produced can contribute to its price. Wines from the Dundee Hills region — the region with the highest ratings in Wine Spectator — command higher prices on a region-wide basis.

Provenance is rooted in a perceived association between location and quality, a connection that can be powerful but fleeting. Goodman (2017) describes the madcap search for New York rock bands in the wake of The Strokes' breakout success in the early 2000s, with some bands cashing the buzz for large record deals. This was mostly a rehearsal of the Seattle Grunge bonanza a decade earlier. Across symbolic

fields, we can find examples of intense, ephemeral arts scenes, where there is something like a mania for products from a certain place.

Some place brands do persist because they are entrenched in local, highly specialized industrial systems that are assumed to have discerning standards. In this case, the provenance premium is a reliable signal of quality inter-generationally. Examples of this can also be found in music. In Detroit (R&B), Nashville (Country) and Atlanta (Hip Hop), there are buzzworthy bands *and* studios, music labels, and institutions, which can be expected to improve a music product. Producers and curators may locate to benefit from the provenance halo of such systems.

This brings us back to the topic of Fleetwood Mac and Los Angeles. The band should enjoy a place premium as an LA music product for several reasons: because LA has historically been a system that produces good pop music, because competition is assumed to be stronger based on its current localization, and relatedly because the curators there are assumed to better recognize talent. If the band passes through these filters, then they must be pretty good.

The same can be said of curators themselves. A music scout in a scene with a lot of musicians should be expected to have a better honed ear for talent. According to this view, Los Angeles is not, then, the tastemaking center because it has more people with cultural capital, but because the curators there are assumed by the market to have a sharper sense of what is valuable and how to value different products. If a music critic survives in the ecosystem that produced "Rumours" then they too must be pretty good.

Co-local affinity is another possible source of a provenance premium. Hometown pride is real, and affection for one's neighbors might impact how curators rate some products. Similarly, a desire to see one's hometown represented and recognized may figure into curatorial decisions. On this score, Griswold and Wohl's (2015) study of the selections of community reading group leaders are instructive. They track over 3,000 book selections from over 500 reading groups, which are convened by librarians and similar curators. They find a persistent regional inflection toward regional writers and regional themes. Such a bias among a cluster of professional curators might create major advantages and decisively impact the value of products in certain markets.

V Curation Across City Systems: Curation as Condensation

We now consider what the localization of curation means at the city systems level. By lowering uncertainty, curation clusters function to stabilize the operation of symbolic industries beyond their edges. This role gives such centers of meaning a degree of power over how symbolic markets operate, and the ability to extract rents from the economic system. Such a role is underemphasized in current discussions of city systems.

Centrality and Curation

Section II established that curators lower symbolic uncertainty, and Section III that clusters of curators do so substantially. Therefore, a symbolically-differentiated product will enter the localized industrial system with a high degree of uncertainty over its value and the curation cluster will then subject that product to socialized evaluation. It will communicate about the product in a high-fidelity (i.e.., F2F) manner, possibly through phased evaluation. Among the many products that pass through this system there will be:

- Superstar products, that are so designated because there was enough early 'buzz' that turned into cascading acclaim, and because they appealed to the tastes of enough similarly situated curators, and
- Considered products that are joined to the consideration sets of curators in the industrial system but are not widely acclaimed. They are on A or B lists but are not understood to be superstar products and so will have higher search costs than superstars. One cannot rely on discussing these around the watercooler, and
- Ignored products, the products that cannot catch on with early curators or even become considered. These are the products that never made it — the scripts that capture dust in Hollywood, the recycled business pitches in Silicon Valley, the surplus wine. These carry less uncertainty because they are assumed to be of lesser quality.

If you are the producer of a symbolically differentiated product, then your success in the marketplace will depend on which of these categories your product is sorted into. If you are a downstream producer or final consumer, then you will always benefit from this sorting system. For the consumer, that system means that the designated products will be worthwhile to consume, on average. For the producer it means that they will recoup the resources that have been invested into them. The system does not need to optimize. It can afford to greenlight bad projects and ignore surefire hits if it produces enough hits to recoup investments.

Seen in this way, the curation cluster occupies a central role in the wider economic geography of symbolic production. That centrality is related to the work that the center does, and not to advantages related to consumption. It is not a function of the diversity of goods that are available in the center in the manner described by Christaller (1966), nor a function of its amenities. Lower costs for consumer diversity, a la NEG, are not relevant either. Centrality is about favorable access to the curation system—the system that helps to determine what symbolic characteristics are valuable.

Elsewhere, 'Global Cities' have been defined as areas that house "command and control functions" (Derudder and Witlox, 2004; Knox and Taylor, 1995) over global markets. Curation is a specific kind of command-and-control function — command over how to value symbols, and control over which products matter. The existence of curation centers is foremost rooted in the uncertainty of symbolic products and secondarily in the general "sharing, matching and learning" advantages which attend industrial production (Duranton and Puga, 2003). In any industrial activity with intermediate trade costs, we should expect some degree of agglomeration in a center; in symbolically-intensive industries, we should expect even more due to the unique agglomeration economies that are described in this chapter: cascading industrial organization, herding of consideration sets, tastemaking power and provenance.

Still, it would be inaccurate to equate curation centers and global cities. Centers of products for which there is no global market would only be global cities by coincidence. UNESCO's registry of *Intangible Cultural Heritage Lists* (UNESCO, 2020) mostly consists of artistic products with localized centers of meaning that are not very global. 'Filete porteño' is a painting technique developed and practiced in Buenos Aires — there's also Malawi's Nsima cooking tradition, Irish Hurling, Turkmenistan's epic art of

Gorogly, and hundreds more. The UNESCO list reads as more of a '549 places to go before you die' list than as a list of global cities, precisely because the practices that it registers have mostly local demand. These centers are conceptually very different from the curation centers that are highlighted here. To be blunt, there cannot be a curation center for filete porteño because there is no global trade in that tradition.

Among the UNESCO list are more prolific cultural forms, such as yoga, tango, and Neapolitan pizza. These *are* broadly significant practices with global economic trade that are also centered in real places (i.e., India, Buenos Aires, Naples). Naples is the center of meaning making for 'authentic pizza'. It is home to some of the most celebrated Neapolitan pizzerias, and where AVPN — the certifying body for traditional pizza making — is based. The curation system in Naples is not as extensive as it is in Bollywood, for three major reasons. First, the market for authentic Neapolitan pizza is quite small relative to the market for film (the market for non-Neapolitan pizza is not small at all). You would not be able to support a large metro area with the traded economic activities of Neapolitan pizza making.

Second, the market for authentic Neapolitan pizza revolves more around site-specific factors like ambience and flavor than on authenticity in and of itself, so the tradable and excludable portion of the Neapolitan pizza industry is small compared to the portion that is based on public information. There are many non-certified pizzerias in the Neapolitan style that do well because they succeed based on these other factors. Curation based on these characteristics is better administered at a local level than centrally. You do not tend to ask the AVPN for a pizza recommendation in Chicago, you consult the community of eaters in Chicago via Yelp! or Eater.

Third, demand for curation from pizza consumers is at the operational level (i.e., the restaurant is reviewed), whereas for films it is at the product level. This leads to comparatively more regular curation for film than certified Neapolitan pizza.

Curation centers, then, are centers of their own world and not necessarily centers of *the* world. They play vital roles in the fields that they center and depending on the scale conditions and profitability of th field they might also be leading global cities. Often this activity will not be enough to catalyze

urbanization on a global scale. As such, we will observe curation centers that are not global cities and global cities that do not exercise leadership in any field whatsoever.

Curation as Condensation

The account here runs up against prominent metaphors in economic geography and planning. One of these is the old Marshallian idea that "The mysteries of the trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously" (1920: 22). The curation centers described here work to take the ephemeral tastes and mental maps of actors and inscribe them onto the market for goods. This work turns a morass of undifferentiated inputs into a manageable number of understood products. Alongside the Marshallian production of symbolic goods, there is a separate Marshallian—that is localized and specialized—system that turns the ephemeral into the understandable and actionable. Marshall's famous turn of phrase, then, suggests that ephemerality is what makes 'creative cities' run, when in fact these systems might run by extinguishing the ephemeral.

Global knowledge diffusion has been likened to "local buzz and global pipelines" (Bathelt, 2004). Actors need to simultaneously embed themselves into contexts that allow them to access tacit dimensions of knowledge and ensure that they can tap into diverse and less tacit forms from elsewhere. The curation centers view implies that a prominent metaphor in economic geography should be amended for symbolic products. In the present account, symbolic products rely on the localized application of symbolic knowledge to products in a way that renders them ready for the pipeline.

Knowledge-based curation will 'travel well' (Rekers, 2016) outside of the cluster only once it is sufficiently processed: searched for, identified, legitimated, structured, within it. We see this most poignantly in the case of rankings, awards, and qualifications. Awards and qualifications encode product characteristics into ordinal values, making them more consumable and demandable by consumers far and wide. Thus, the market for theatrical releases gets filtered into a list of Oscar nominees by a (largely Los Angeles-based) jury and presented to global consumers in a way that makes quality uncertainty less pervasive.

Elsewhere, filtering occurs upstream of the consumer and is, from their perspective, hardwired into symbolic products. The opera consumer does not even need to concern themselves with what shows to see because they enter once whole systems of curation (schools, producers, critics) have filtered selection considerably. The product at market is already designated as "good enough" by series of curators who preceded it. This series of curators, for all the reasons listed in the prior section, tend to organize production at a local level.

The role of curation in city systems invites a physical analogy that emphasizes curation as transformation or phase change. When elements change from having the physical properties of gas to the those of liquid, *condensation* is said to have occurred. This is apt. What is "in the air" must become liquid and portable. Buzz must be transformed so it can move in a pipeline. Aesthetic judgements have only a loose basis in physics, but through curation they become real things. Figure 5.1 indicates this on its right side— designating condensation as the outcome of localized curation. Without curation, which is most efficiently organized in clusters, the level of uncertainty in symbolic consumption would be orders of magnitude higher, and the size of those markets would be lower. This view of cultural centers as fashioners of uncertain and ephemeral notions into knowable and controllable heuristics is central to understanding the relationship between places like Hollywood and the wider marketplace.

VI Preliminary Empirical Evidence

Curating occupations cluster more.

Having now seen why curators should agglomerate, we can begin to see whether they do, albeit with the crude occupational data and schemes that were deployed in Chapter 4.

Among the multiple established ways to measure the agglomeration of activities is the locational Gini coefficient developed by Krugman in 1991 (see Kopczewska et al. 2017 for a review of all measures). This metric has the advantage of being easily interpretable and familiar and can be calculated with standard occupational data. Gabe and Abel (2012) measure occupational concentration using locational Gini coefficients, finding evidence for labor pooling externalities. Table 5.2 shows coefficient scores for each job

category sorted by agglomeration tendency. As is true for the more common Gini measure, a score of 1 indicates complete occupational concentration in a single labor market and a score of 0 suggests full dispersion. Here, averages within each category are weighted so that higher employment occupations contribute more to the category average.

Table 5.2 Locational Gini Coefficients by Occupation Type, Weighted by Employment

Job Type	Category	Locational Gini Coefficient
Research	Core Curation	0.56
Travel	Core Curation	0.50
Entertainment	Core Curation	0.46
Language	Core Curation	0.44
Postsecondary Education	Core Curation	0.42
Personal Appearance	Core Curation	0.41
Journalism	Core Curation	0.38
Real Estate	Core Curation	0.38
Advertising	Core Curation	0.37
Design	Core Curation	0.35
Non-Curators	**Non-Curation**	**0.33**
Investment	Core Curation	0.31
Public Relations	Core Curation	0.31
Management	Professional Curation	0.31
Medical Resources	Professional Curation	0.30
Legal Services	Professional Curation	0.28
Education	Professional Curation	0.28
Human Resources	Core Curation	0.22

The 10 categories with the highest locational Gini coefficients are part of what was called the "Core Curation" occupational group in Chapter 4. Non-Curators as a class rank closer to the middle of the distribution. Investment and PR jobs are somewhat more dispersed, followed by all Professional Curation categories and Human Resources. Thus, this exercise has mostly recreated the 3-Part typology from Chapter 4's clustering analysis. Jobs that are the most intensive in symbolic choice do seem to agglomerate more.

These estimates would appear to understate the true magnitude of agglomeration, moreover, because they are based on large and loose occupational categories which group heavy and less-heavy curators in the same category. A travel agent who personally assembles trendy trips (e.g., hot yoga in Tulum) and one who primarily makes reservations would be more and less subject to agglomeration forces but nonetheless included under the "Travel" occupational category using these statistics. The relatively large share of 'humdrum travel agents' among even these core curation jobs, is likely dragging these estimates down from what they'd be with high resolution data.

Moreover, the conventional approach to measuring agglomeration might not be the best way to test a field's tendency to concentrate in a single center of curation. Indices like the locational Gini test spatial clustering across the distribution, not in a Fleet Street or Hollywood or Silicon Valley-type locale. But these types of complexes are by far the most relevant to the kind of agglomeration processes laid out here. Kemeny and Storper (2012) emphasize the "absolute concentration" that is embodied by such districts over the relative concentration that would be measured through location quotients.

A simple measure of how much global activity is found in a single place gets at this aspect of concentration. This is the 'center of the universe' dimension—how much all action in a domain takes place in one region. Table 5.3 shows the average employment share in the top labor market for each occupation/product category, capturing the degree of absolute concentration by sector. As a reference, New York's labor market is home to 6.6% of all workers in America. The ranked order of categories based on the primacy metric differs somewhat — Journalism and Entertainment top this list and professional jobs now appear to cluster more than Non-Curation jobs. Most importantly, however, Core Curation jobs as a class appear to agglomerate more as a class.

Table 5.3 Average Occupation Share in The Top-Employing Labor Market

Product	Type	2019 Jobs Share
Journalism	Core Curation	17%
Entertainment	Core Curation	15%
Investment	Core Curation	15%
Advertising	Core Curation	13%
Research	Core Curation	13%
Personal Appearance	Core Curation	11%
Travel	Core Curation	11%
Design	Core Curation	11%
Public Relations	Core Curation	10%
Social Capital	Core Curation	9%
Management	Professional Curation	8%
Medical Resources	Professional Curation	8%
Postsecondary Education	Professional Curation	8%
Human Resources	Core Curation	7%
Legal Services	Professional Curation	7%
Overall Labor Force		**7%**
Education	Professional Curation	7%
Alcohol	Core Curation	6%
Non-Curating		**6%**
Real Estate	Core Curation	5%
Language	Core Curation	5%

The overall level of clustering for Core Curation jobs is higher, but is it so high as to suggest that agglomeration forces are themselves powerful? Probably not. The revelation that 17% of an activity is located in one place does not exactly suggest that an occupation's entire organization revolves around one region in the way that English publishing revolved around Fleet Street. But, again, these statistics are averages across groups of job categories. If there is a high degree of agglomeration variability at the group level, then these analyses would underestimate the possible level of clustering. Analysis at a detailed level bears this out.

Figure 5.2 presents histograms showing the distribution of occupations on the primary metric, distinguished by occupation type. The first panel shows a discernable right tail for Core Curators that

extends out toward 80%, and smaller tails for the other categories. Clearly, there are some occupations that substantially cluster in one place.

Figure 5.2 Distribution of Occupation Primacy by Occupation Group

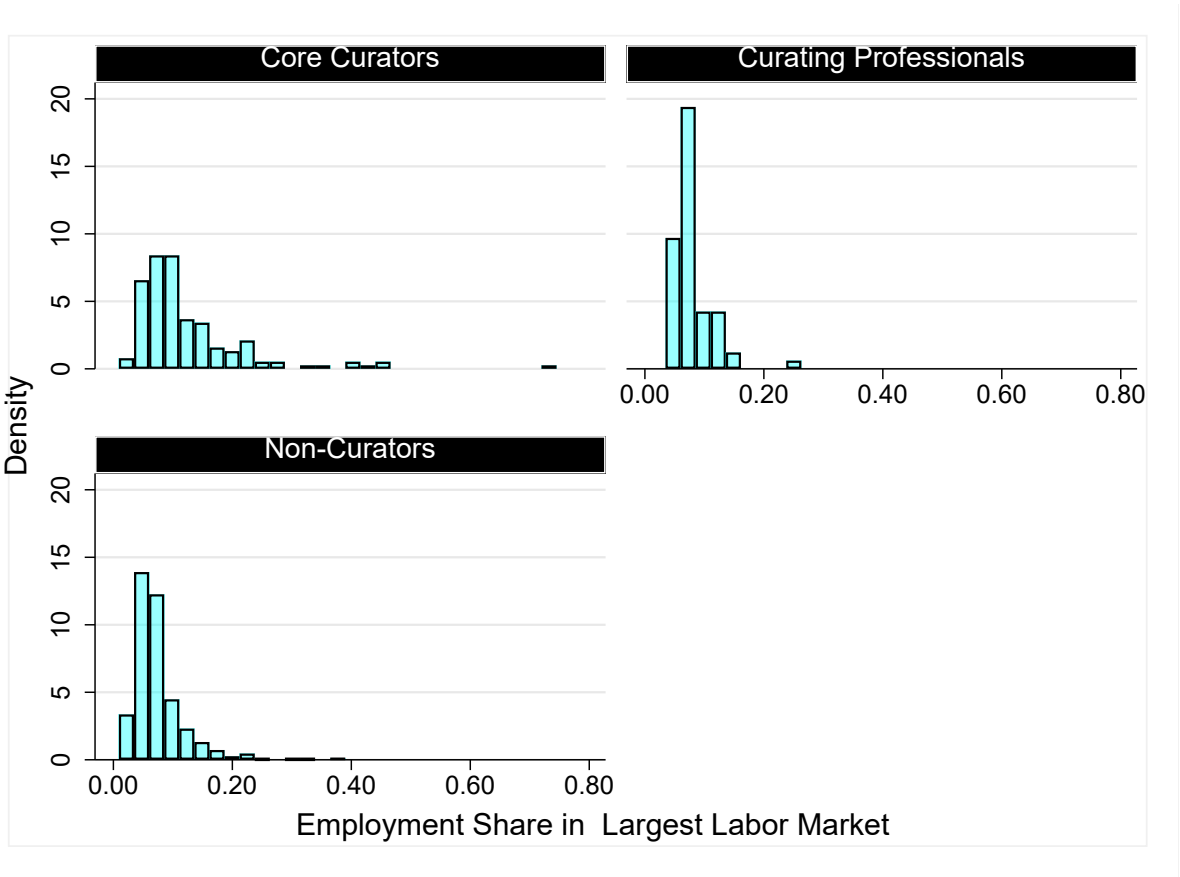


Table 5.4 lists all 49 such occupations that command at least a quarter of all wages. Of these, the overwhelming majority are Core Curation jobs. Political Scientists in Washington earn more than 3 out of every 4 dollars, and Economists earn more than 1 out of every 2. There are substantial clusters of certain film, music, and fashion workers in Los Angeles. New York has major clusters in fashion, investment, advertising, and entertainment. Las Vegas's hospitality cluster is home to a large share of all Gaming Supervisors, who are not curators but who are certainly attached to a symbolic industry. Charleston's Motorboat Operator cluster appears to be related to a large water taxi network. Houston has Energy Scientist, Technician and Engineer agglomeration, strongly suggesting that some clusters have

agglomerations of curators and non-curators alike. Similarly, Los Angeles has a cluster of Sound Technicians and Camera Operators, who are surely all joined to a larger entertainment complex.

Table 5.4 The Largest Occupational Clusters in the United States

Attribute	Area	Category	Wage Share	Job Share
Political Scientists	Washington	Core Curators	77.0%	72.0%
Film and Video Editors	Los Angeles	Core Curators	53.2%	40.8%
Economists	Washington	Core Curators	51.4%	46.3%
Makeup Artists, Theatrical and Performance	Los Angeles	Core Curators	49.8%	45.3%
Fashion Designers	New York	Core Curators	43.1%	39.7%
Transit and Railroad Police	New York	Non-Curators	42.5%	36.8%
Petroleum Engineers	Houston	Non-Curators	37.4%	33.2%
Agents and Business Managers of Artists, Performers, and Athletes	Los Angeles	Core Curators	36.1%	33.9%
Subway and Streetcar Operators	New York	Non-Curators	35.7%	29.6%
Camera Operators, Television, Video, and Motion Picture	Los Angeles	Non-Curators	33.9%	28.3%
Sound Engineering Technicians	Los Angeles	Non-Curators	31.1%	25.7%
Geoscientists, Except Hydrologists and Geographers	Houston	Core Curators	30.4%	21.3%
Industrial-Organizational Psychologists	Washington	Curating Professionals	29.7%	25.5%
Producers and Directors	Los Angeles	Core Curators	29.5%	19.8%
Fabric and Apparel Patternmakers	New York	Non-Curators	29.3%	22.0%
Fabric and Apparel Patternmakers	Los Angeles	Non-Curators	28.4%	24.5%
Fashion Designers	Los Angeles	Core Curators	28.1%	27.5%
Costume Attendants	New York	Core Curators	27.7%	21.2%
Securities, Commodities, and Financial Services Sales Agents	New York	Core Curators	27.6%	17.5%
Motorboat Operators	Charleston	Non-Curators	27.5%	21.6%
Jewelers and Precious Stone and Metal Workers	New York	Core Curators	27.1%	22.6%
Art Directors	New York	Core Curators	26.6%	21.4%
Advertising and Promotions Managers	New York	Core Curators	26.4%	18.4%
Set and Exhibit Designers	Los Angeles	Core Curators	26.1%	22.8%
Agents and Business Managers of Artists, Performers, and Athletes	New York	Core Curators	26.1%	23.5%
Gaming Supervisors	Las Vegas	Non-Curators	25.9%	22.1%
Geological and Petroleum Technicians	Houston	Non-Curators	25.5%	18.4%
Editors	New York	Core Curators	25.2%	20.7%

Netflix Curates in Hollywood, not Los Gatos

Like so many internet firms, Netflix is formally based in Silicon Valley. Its Los Gatos, California headquarters is near the base of operations for Smashwords, Plex and Roku. The common understanding of the headquarters as locus of power in the firm (Adler and Florida, 2020), if it is at all relevant, does not seem to apply to Netflix. The firm's core functions of licensing and content creation — which are key to its modern business — are based in Hollywood and not Silicon Valley. It is currently the largest renter of commercial office space in Hollywood itself, renting 1.4 million square feet of space as of 2019. The flagship of this is a 13-story, 92,000 square foot office building that the company is wholly occupying (Barragan, 2019).

Public information from LinkedIn confirms that this is where core curation functions are centered. The firm's "Co-CEO and Chief Content Officer", "VP Original Films", "VP Content Strategy and Analysis", "VP Original Series", "VP Original Features and Documentaries", and "VP Talent" are all based in Los Angeles, along with their subordinates. Los Gatos and Sunnyvale are home to the CEO, Reed Hastings, and technology-focused executives like "VP Product", "VP Product Innovation", and also its analytics functions like "Director Real Time Data". Elsewhere, Netflix has content production facilities in lower cost areas — Albuquerque, New Mexico, Madrid, and Buckinghamshire — and is planning a 130 person "content production" operation in New York (Sandberg, 2019).

In a counterfactual world without regional agglomeration economies to entertainment curation, we can imagine an alternate history in which Netflix locates its streaming operations in Silicon Valley. It would surely benefit an emerging tech superstar to be able to consolidate its executive functions, and perhaps such a move would have suited an insurgent company. Back on Earth 1, the firm seems to have decided that it needed to locate the work of acquiring content, developing it, and finding talent in Los Angeles—that is in the extant center of entertainment curation. This is fully consistent with the idea that modern streaming is like the book curation of a bygone era. Los Angeles provides a perch from which to conduct F2F business with a network of other curators and producers, allowing the firm to contribute to and exploit curation cascades, to calibrate its internal sense of what is valuable to the rest of Hollywood, and perhaps to derive a

benefit from being 'where the action is'. This is presumably also why they have expanded to New York. The firm is more than happy to put the nuts-and-bolts production of content in lower cost areas, and to accept business subsidies from the same (Netflix, 2018), but as far as curation goes, it seems to behave exactly like the major studios which have most always done their development in the city. Google, another Silicon Valley titan with a streaming platform, seems to have installed its YouTube team in Los Angeles as well.

VII Conclusion

This chapter has proposed that curation is subject to increasing returns to agglomeration for five reasons: input sharing, the ability to support serialized curation, agreement about which products form the market, taste making power, and place branding effects. The extreme clustering of detailed curating occupations makes agglomeration economies in curation (if not these precise ones) more plausible, as does the tendency for a key entertainment company to locate curation away from its putative headquarters.

Neither the theoretical nor the empirical analyses here are meant to suggest a universal tendency of curators to agglomerate. Whether professions agglomerate will depend on the net costs and benefits of clustering at the product level. Products such as university education must be more accessible to their final markets than products like entertainment or investment. The returns to agglomeration among curating activities should also vary, as should the sensitivity of an industry to local land rents. What is suggested here is that real and often powerful clustering forces act on curation, pushing it to happen in 'creative cities' or similar agglomerations.

Chapter 6: Curation and The Economic Geography of Popular Music

I Toward a Detailed Study of Curation

This chapter reports on a field level study of curation, using it as an opportunity to reflect on the theory that was developed in Chapter 5. The case is the major music festival market in the United States. Prior to the Covid-19 pandemic[30], the music festival was one of the pre-eminent music products in the modern, internet-mediated pop music industry. At the heart of each festival is a lineup of performances that mostly represent the kind of musical experience that the consumer expects to have. No music festival lineup is the same, and the content of the lineup is likely the largest determinant of a festival ticket's value, eclipsing the setting and on-site amenities[31]. The festival is therefore an especially apt setting for studying how symbolic choice operates, and especially for assessing the industrial organization and agglomeration of the music industry.

The chapter unfolds as an account of popular music's modern geography, through the lens of festivals. It begins with a more detailed account of why pop music is a prime study site. Section III then reviews recent supply shocks to popular music and how they have led to increased demand for curation. Exactly as was the case for books in Renaissance Europe, the rapid expansion of the music marketplace has led to greater consumer and producer uncertainty, which in turn has led to greater demand for curators. Section IV describes a study of popular music via the music festivals. This seeks to operationalize the constructs and theories developed in Chapter 4, especially curation itself, the recycling of curation inputs, and provenance effects. Section V reports supportive findings vis a vis these hypotheses, and Section VI reflects on these from the standpoint of city regions that interface with the popular music industry or would like to.

II Popular Music as a Curated Field

Popular music meets the definition of a curation-intensive industry, in that its products are both highly symbolic and highly variegated. What a music product represents will decide its value more than what it is in some stable scientific sense. Either the artist represents something appealing to the consumer or she

[30] Whether the pandemic represents another disjuncture in professional music or a kind of intermission in the current model is not yet clear.

[31] Maybe the biggest indication of this is the case of Coachella and Stagecoach. They are held on the same site one week a part, but Coachella, with its vastly different multi-genre lineup, is 50% more expensive than Stagecoach and attracts more fans.

conforms to a set of aesthetic tastes and preferences which themselves cannot be reduced to a set of stable objective codes. These conditions structure marketplaces where subjective and processing uncertainties are high for consumers who do not rely on curation.

The Pop Music Artist as Symbol

Bob Dylan is not an objectively good singer by any metric of melodiousness, and Beyoncé may command the highest performance fees on the planet without having perfect pitch. These popular music superstars are judged to be valuable based on some ensemble of characteristics which transcend their natural or acquired ability and extend to what the performer themselves represents. The value of a music product is inseparable from the artist and what is connoted by their appearance, affect, biography and more; the combination of the music and the artist is the final product.

The inseparability of pop artist and product means that we cannot imagine a counterfactual where Bob Dylan topped the charts with both "Like a Rolling Stone" and "Drunk in Love". The former can be easily identified with a Minnesotan folk singer from the 1960s. The latter features the following lines which only acquire a kind of urgent and authentic meaning when they are associated with a celebrity pop star from the 2010s. It is hard to imagine these as Bob Dylan lyrics:

> "Cigars on ice, cigars on ice
> Feeling like an animal with these cameras all in my grill
> Flashing lights, flashing lights
> You got me faded, faded, faded."

Pop music markets will rely on contributions from more technical professionals, who are hired to do things that are objectively or even algorithmically definable — 'Sing in C Sharp, Drum at 5/4' — but these are akin to technicians. They are analogous to the printers who ably guided the printing press. In popular music, performances or recordings will be evaluated based on the product itself and based on the symbolic meaning of that product in relation to the producer.

Music Value as Unknowable

Even if there is some ontological basis for what makes valuable pop music (a strong claim), our current understanding of the properties governing that value is highly limited. Pop music industry insiders, those

with (presumably) the most expertise about the field, deploy opaque adjectives to describe the best music— 'catchy', 'cool' — that give little hint about the source of value and inspire little confidence in the robustness of their claims. This is much different than in a non-symbolic, or even a Mixed, product. An assessor of a car's value will at least be able to test certain aspects, such as horse-power and fuel economy, and build something like a scientific measure of its value.

This is not to completely deny that knowable and scientific precepts operate in the music industry. As Chase (2006) points out, there are also stable, universal theorems that are said to originate from slow, bio-evolutionary processes related to language generally. If they wish to create attractive music, producers cannot flout these rules. Dissonance is a musical term describing sounds that do not go together (Merriam Webster, 2020) based on some implied and largely universal standards. Similarly, there are certain pop music regularities — for instance pop songs still tend to be between two and three and a half minutes, and to be over 100 beats per minute, and to center on discussions of love, sex, or youth. However, you cannot ensure that a music product will be successful by following any scientific formula, and you may also succeed by flouting the standards that do exist. Pop music superstars tend to have preternatural vocal abilities, but so do most people who make it to the second round of American Idol, and all the same Bob Dylan is a music superstar even with bad pitch. Whether you are a music producer or consumer, both your interpretation of what music you value and what music is valuable will turn on its conformity to some symbolic taste system, which is emergent, external, and as such highly unknowable.

Music Variety Across Eras

Across eras music tends to have low barriers to the supply of variety, owing to both the link between creator and product and the low marginal costs of producing new varieties for each creator. Because music products cannot be decoupled from their producers, the level of variety in music markets increases with the entrant of each performer/product combination. A performer of two different songs is bringing separate products to the market, as are two performers who produce the same song. A cover or tribute version of Bob Dylan or Beyoncé is much more like an inferior product of the original than a clone. Karpik's (2010) concept of singularities is appropriate here. Different product/product combinations are different varieties,

which are not fully comparable to each other or reducible to some theoretical vector of characteristics via Lancasterian (1966) accounting. Every product is unique for the same reason that every human is alleged to be special before God.

Overwhelmingly symbolic markets like music tend to sustain more variety than preponderantly symbolic ones. Again, when products are distinguished based on their function or physical form, then new varieties will tend to displace old ones. If the new mousetrap catches more mice or costs less while catching the same amount, then it will tend to displace the incumbent. This is very much not true in music, where there seems to be a preference for variety at the individual consumer level. This is evidenced by:

- Sampling and remix culture.
- Music traditions like Jazz and Jam which encourage improvisational solos.
- Song covers and numerous other musical conventions, and other examples.

Not only did the smash Trap/Country hit "Old Town Road" top the Billboard 100 Chart in 2019, but it was joined there by 4 different remixes. There are also, undoubtedly, supply conditions which promote the variety of production in music. For instance, it is possible for the same master recording to give birth to batches and batches of new recorded music products, something that cannot be compared to perishable goods.

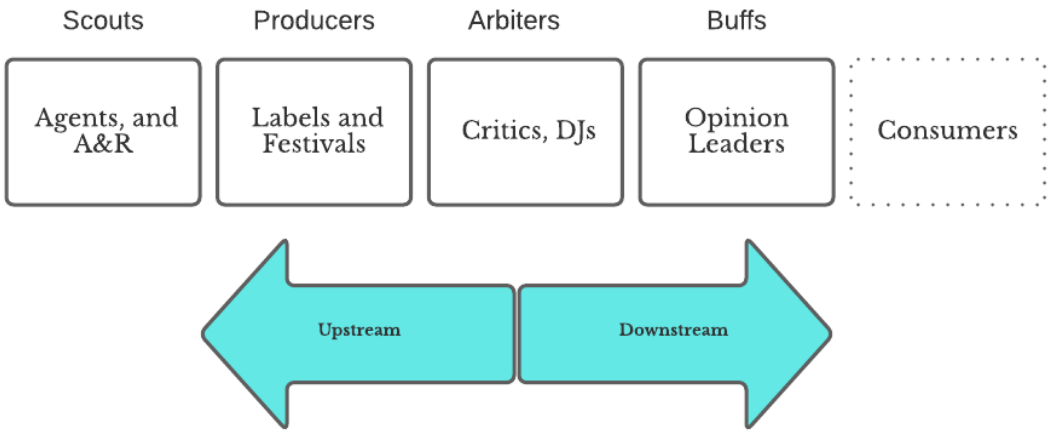
Assorted Forms of Curation in Popular Music

Popular music is clearly an extreme example of a symbolic product. Its degree of symbolic differentiation is very high, and the level of variety/selection greeting the consumer or intermediate producer is vast. It is no surprise, then, that there are so many forms of curation in music, most of which have already been glancingly referred to in the prior chapters. Figure 6.1 summarizes some key types of functions and examples of functionaries.

Early curation comes via scouts — what Hirsch (1972) calls 'boundary men' — who are charged with the somewhat uncomfortable task of wading around in the sea of music producers. For these curators, processing uncertainty is the highest. A classic kind of scout is the Arts and Repertoire functionary. They

are often entrusted with the ability to sign unsigned pop music acts, thereby providing those acts with a certain status. The agent is another kind of scout. They possess social capital with organizations that can be used to secure more favorable terms on behalf of their clients. Then there are organizations themselves, who assemble music teams and provide the capital for music products, including recording and festivals. There are rounds of curation within an organization, and not all signed acts will receive investment. Once music products have been assembled, they may be evaluated by professional critics and other arbiters who act on behalf of the consumer to decide what music is worth listening to. In some cases, the arbiter will generate a small consideration set, in others (as with DJs) they will decide what the consumer listens to. Finally, there are Buffs or perhaps Nerds. These are heavy music listeners who develop expertise and are trusted sources of curation for their personal networks. By the time a music product arrives literally in the consumer's ear canal, it has usually traveled through this system of curation, either directly (e.g., by the consumer reading a review) or indirectly (e.g. by the consumer listening to an opinion leader who has read a review).

Figure 6.1 Forms of Curation in Popular Music



III A Recent History of Popular Music

Many industries have been disrupted by digital technologies. Music is unusual in that it has already been remade once and is currently undergoing a second stage of upheaval[32]. It was one of the first creative industries to see its "material base" (Jones et al., 2015) converted to bits and bytes. This change, like the European printing press revolution before it, flooded variety into the system and ushered in a period of spatial-organizational adjustment. Just as was the case in publishing, popular music has relied more on curation functions to remove excess variety from the market.

Recorded Music Before and After Napster

The industry's twentieth century profit center was recorded music, distributed to consumers via a linear system wherein major music labels occupied central roles. The label was not only responsible for 'Hirschian' curation functions like discovery and filtering but also for converting raw musical inputs (artists, songwriters, session musicians, marketers) into polished music products and distributing recording music to radio stations and retailers, with the backing of large marketing efforts. This expansive system was rationalized by scope economies across these production functions (Tennent, 2013) and low-marginal cost scale economies that are common among creative industries (Caves, 2001). Tschmuck (2012) meticulously reconstructs the history of the industry in the 20th century, showing that the industry experienced ongoing consolidation into bigger and bigger labels by the late 90s.

It would be a mistake to say that 'digital music' itself changed the structure of the late-20th century music industry. In fact, music labels had anticipated and quickly implemented digital disc technology in the 90s and used the new format to power unprecedented profitability through most of that decade. The true nature of the digital threat was only clear in 1999 when Napster, one of the world's first ever digital marketplaces, saw its first song upload. By 2000, global industry revenues had fallen eight percentage points as many consumers opted for sources of free music over such services. P2P services, which allowed consumers to directly transmit music files to each other not only cut out the wholesaler or retailer but made

[32] We can understand popular music as music that appeals to large audiences. Some references consider it to be music that *seeks* mass consumption, but the present definition is easier to operationalize within the present study and beyond.

it possible to consume the marginal music product for free[33]. That this practice was mostly illegal did not slow its diffusion.

The previous system's reliance on 'bricks, not clicks' (Tennent, 2013) in distribution, not digital products themselves, came to be its undoing. Releasing music through radio stations and retailers meant higher costs to access music products and a lower degree of choice, than in the P2P file sharing system that was emerging. These costs were roundly rejected by the market, especially by younger computer-savvy cohorts that had traditionally been at its center (Liebowitz, 2016; Hong, 2011).

Some economists and policy scholars worried that piracy would lead to less production of music, as might be suggested by intellectual property theory. Estimates of music production found no such effects (Waldfogel; 2012; 2011) showing that if anything the quantity of songs produced had increased. Separate from this question is the 'effective supply' for consumers, that is how much variety a consumer has access to at market) and digital marketplaces clearly increased this kind of variety. Each user's supply was the same, by virtue of their connection to the streaming network, and there was no longer a gap between total market variety and the variety that the consumer could access. This variety-enhancing effect is common across digital cultural marketplaces (Jones et al., 2015).

Music variety was uniquely enhanced by the loosening of the album format. In the 'bricks not clicks model' the album and not the single was the focal product of production. Singles were understood as developmental products that lowered label investment costs, allowing artists to demonstrate success before they recorded a full album. Full albums were not recognized as good value to customers who often only enjoyed a few songs (Tschmuck, 2012). In the digital market, the album was no longer a physical container for selection and the consumer was free to purchase more songs from more albums with the same budget (Elberse, 2010).

21 years on from Napster, the average consumer has a different relationship with popular music than before in one respect. Music is now something that is functionally infinite in supply at the point of

[33] There were still fixed costs in the form of technology acquisition.

consumption. Any internet-connected smartphone or home system can retrieve nearly any song published by a major label in the last fifty years through services like Spotify and Tencent. Music is also significantly cheaper and more multifaceted — less of the consumer paycheck goes to recorded music, but more is likely to go to live performance.

Napster was not anticipated by key industry actors and coordinated efforts to react to it may have been too late. Lawsuits against consumers were ineffective and unpopular; attempts to sue streaming services were not able to stop new purveyors from coming online, and new laws which tightened penalties were not sufficient disincentives. Napster itself was eventually defanged through litigation and neutralized through acquisition but its demise did not mean the end of illegal streaming.

Figure 4.2 shows international music revenues as reported by the major music trade association, the IFPI. The recent history of music, with its many subplots and turns is neatly summarized here. Using this figure as a centerpiece, we can recognize the key narrative subplots related to how the music industry responded to digital music. As mentioned above, there were probably two separate digital supply shocks in the music industry.

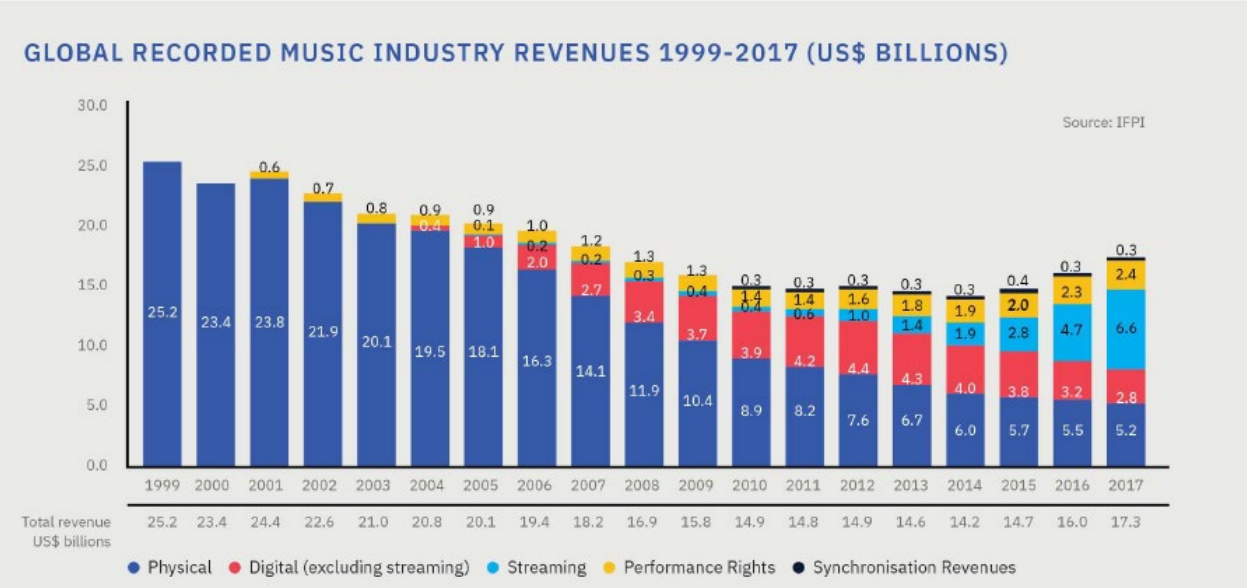
Round 1 Diversification (2001—2011)

The industry initially responded by diversifying its business model. The business of music started to become less about the recording and distribution of music. Such was the dominance of physical music products over the business of music that the IFPI only tracked recorded music sales prior to 2001.

The prior business model was reflected in the preferred contract structure for major popular artists. Under that arrangement, almost all proceeds from music products for the recording firm were reserved for the label, leaving artists to reap most of their proceeds from concert tickets and merchandise sales. Digitization has changed this. Digital music products do not substitute for the immersive experience available at live events and are a safer cache of value for music companies. Even if live growth had been zero, they would have become a relatively more important source of revenue. However, as Figure 6.2 makes clear, revenues from live performance have increased year-over-year since they were first tracked in 2001.

Several studies suggest that the trend toward live music as a source of revenue coincides with streaming. Mortimer and colleagues (2012) and Connelly and Krueger (2006) show strong discontinuities in the demand for concerts in the early 00s, and Nguyen and colleagues (2013) find experimental evidence that free recorded music leads consumers to spend more on live performance. It turned out that concerts and digital music were complements-- decline in the price of one would increase demand for both.

Figure 6.2 "Global Recorded Music Industry Revenues" From IFPI, 2018



As more concert tickets were consumed, what live music entailed came to change. The live music product improved as new stadiums were constructed in the early 2000s (Sizemore, 2010) and as more acoustically advanced music-only venues came online. Digital lighting and sound were a boon to new and old venues alike. Finally, and most appropriately for this chapter, the new century saw the resurrection of the large format, multiday music festival as a major pop music product. What had been more of an anomaly or nostalgic throwback in previous decades came to be the site of the most relevant popular music. Coachella and Bonnaroo were each founded in the early part of the 2000s, and by the end of the decade were seeing hundreds of thousands of attendees. Two older festivals, Lollapalooza and South by Southwest, count this as the period when they crossed into the mainstream (Wynn, 2016). According to the National

Endowment for the Arts (2010), there were some 146 major American music festivals by 2010, most of them associated with popular genres.

Diversification beyond physical music products was associated with profound changes in the organization of the music industry, including the entry of new large corporate players. Apple, a tech company, became the leading electronic retailer of music during this time, exploiting the labels' reluctance to embrace e-commerce. Live events operations such as Live Nation and AEG Live also entered the market, and by the end of the decade were key players in the industry — by 2009, Live Nation had purchased live events mainstay Ticketmaster. These companies were arguably more prepared to respond to key changes in the industry than the established music labels and were able to recognize the change in industry dynamics earlier. The new firms, Live Nation in particular, were earlier adopters of the '360 Deal' — an arrangement that entitled firms to a share of all artist revenue streams, not just recording streams (Marshall, 2012). However, by the end of the decade, traditional firms were referring to themselves as music companies instead of record labels, thus conceding that a new era of popular music had begun. Traditional labels emerged out of the 2000s with smaller rosters of artists (Watson, 2015, and smaller budgets and, all the same, with a sense of how to be profitable.

Round 2 Growth (2011–2019)

The growth in music industry proceeds since 2012 has been driven by recorded music sales — initially through digital marketplaces, and more recently on streaming services (Figure 4.2). Spotify, a Swedish Company founded in 2009, is the recognized leader in music streaming, valued at $25.9 billion upon its 2018 IPO. In addition, services such as Apple Music, Tidal (American competitors to Spotify), Pandora (an online jukebox), SoundCloud and Bandcamp (platforms which cater to independent artists), and Tencent (China's comparator to Spotify) have all grown to prominence, if not quite to profitability.

Meanwhile, the live music sector has continued to grow. Concert attendance has continued to grow and totaled 83 million last year, and ticket sales have grown even faster owing to stronger revenues for premium seats. The same dynamic is present for music festivals. While there appears to be some saturation in the number of festivals, as evidenced by the discontinuation of some events, total festival proceeds

continue to climb. In 2018, Coachella and Outside Lands festivals were two of the three largest music events in the world, earning $114 million and $32 million respectively.

21 years removed from the Napster crisis and before the Covid-19 pandemic, the music industry had reason to be optimistic. It was not close to the revenue levels that it had in 1999, but it was seeing growth in several revenue areas and markets. The pandemic, of course, has created a massive crisis for the newer live area of the industry.

The Modern Music Industry as Choice-Intensive

The recent history of popular music can be understood as a transition from an already overwhelmingly curatorial field to a field that has basically made the library of major recorded music available to anyone with a phone and ten dollars a month. The symbolic intensity of music has not changed, which is to say that music has always been symbolically intensive, arousing consumer uncertainty over what is and is not valuable, and it continues to be so. The major change has been that the sheer selection of music for modern consumers is qualitatively larger than it was even at the beginning of the first digital crisis. As an example, Spotify collects every song controlled by the major labels and many more in one place and makes 1,000 songs as expensive as 2. There are no physical limits to playing these songs. The consumer can play songs from different albums without having to stand up or even think about their choice.

While this immense selection may be celebrated in some corners, there is reason to believe that the expectation to optimize choice in such an environment is mentally taxing for consumers (Schwartz, 2004; Iyengar and Leppar, 2000). In the prior chapter, the imposing nature of modern choice was described as processing uncertainty. The attached pressure is uncomfortable for consumers and even heavier for professionals, for whom choosing 'correctly' carries enormous economic consequences. Modern A&Rs are now searching for needles is much larger haystacks, with the knowledge that their competitors are doing the same. In strictly economic terms, 'the paradox of choice' creates transaction costs to variety. The transition to a Spotify-age in music involves lower costs in production and distribution but higher transaction costs.

These cognitive demands are managed through curation, which plucks acts from the obscurity of a Spotify or YouTube library and designates them as valuable enough to be consumed, or at least to be added

to the consumer's consideration set. Returning to Spotify, at least 20% of Spotify's streams come from algorithmically-chosen playlists, and according to owners of the company stock, these are said to be the company's most valuable asset. At an artist level, the inclusion of a song on such a list is estimated to improve an artist's popularity on the platform by 50-100%, and to help them across their portfolio (through tour tickets, merchandise etc.). Music festivals are a relevant example. Inherent to the very concept of the music festival is the idea that some curator/selector will bundle together a manageable selection of music, thereby freeing the consumer from having to select music products on an a-la-carte basis. The choices made at festivals have been shown to impact streaming behavior on platforms (Maasø, 2018). There is also ethnographic evidence to suggest that music products are themselves being filtered more through curators (Jansson and Hracs, 2018).

Curation in pop music has intensified along at least three margins:

- Record labels, which under the old model were gatekeepers to recording capital, no longer monopolize recording infrastructure. Instead, their value is now as promoters and marketers (i.e. curators).
- As the business model for popular music has diversified, there are now more intermediaries performing symbolic choice. Live promoters and licensees are now more important than they had been under previous regimes. Per the model in Chapter 5, these actors should interact by sharing curation signals with each other.
- Choice for the digital music consumer is no longer limited by physical warehousing and shelving constraints. As choice has increased, so has demand for curation.

This chapter aims to both document how a more curated music industry is spatially distributed and draw out the precise relationship between curation functions and music production.

IV Study Hypotheses and Design

The current study contributes to the understanding of how modern music is organized by analyzing the importance of curation in music festival programming, the importance of local context, and the relevance of

these things to the regional import and export of music acts. Here I describe my empirical strategy for studying curation and geography in the music industry. I begin by describing generally how the framework developed in Chapter 2 would extend to the music festival market.

Thinking Through Curation in Pop Music

Curation is a Source of Value in Pop Music

In the framework described in Chapter 5, music products are understood to have both a consumer-nested and a socially-nested component. At the personal level, there is what might be thought of as preference, that is a person's natural orientation toward a product. This is the affinity between consumer and product without any contamination by social influence, and the characteristic that Howard Becker (1982) calls taste. It is the pure form of aesthetic value that Immanuel Kant (2000) proposed was central to the aesthetic experience.

In a music context, an uncurated individual preference is what is demonstrated by an individual who discovers a song as they hear it for the first time. They might tap their foot, they might turn the song off after a few bars, they might fail to notice it; in each case, their valuation of the song is fully individualized. This component of value is peripheral to the current study.

This study is primarily concerned with the influence of symbolic valuation —called curation here — on value. A curator provides a kind of certainty regarding the valuation of symbolic products that cannot be scientifically or objectively deduced. When there is enough curatorial agreement, or in the rare case, when a curator holds sovereign tastemaking power, curation is an independent source of value that rivals or even eclipses a product's innate qualities.

As is argued above, the modern music industry is ripe for curation because in addition to being highly symbolic, it is marked by excessive choice that imposes processing uncertainty on its buyers. At the other end of a Spotify feed, there is a veritable firehose of music that in its purely uncurated form would be enough to intimidate even the most seasoned listener. In such an environment, it is more useful to have

stable and reliable curation signals, and these can shape value, if only by drawing consumer attention to individual products.

The independent power of curation in music is flexed every time a music song or album climbs the charts long after its release. The Beatles' version of "Twist and Shout" was released in 1964, when it became a top 10 record in the US and Great Britain, and it climbed the charts once again in 1986 after being featured in *Ferris Buller's Day Off* and *Back to School.* As a rule, products that receive more curating attention at any stage, and products that are passed through curation relays such as those depicted in Figure 4.1, will be more valuable.

Even songs that have been devalued by those same systems will end up more valuable than those that languish in obscurity. We might call this the "William Hung Rule", after a reality show contestant with a famously bad performance style whose album reached #34 on the US Hot 100, higher than any Velvet Underground album ever. We know from Chapter 2 that William Hung products are big winners due to the economics of attention. Attention is almost always a precondition for consumption. We tend to only consume products that we know about. Attention is also scarce; we can only hold a limited number of objects in our immediate attention, and when we consume curation signals about a product, we are more likely to devote our attention to that product. As a result, a curated product becomes much more likely to be consumed than a product that has not earned consumer attention.

This study is highly influenced by the experimental research on the relationship between music value and social influence from Salganik and colleagues (2006). Researchers there observed the popularity of music recordings under varying degrees of social influence. They found that only the top and bottom decile of songs under the null condition (no social influence) maintained their relative position under increased social exposure, suggesting that some degree of "musical quality" is dependent on the valuation of others. Moreover, as social influence was introduced, the distribution of popularity became more unequal (i.e., superstardom was exaggerated).

Here, social influence takes the form of professional curation by music journalists and music festival programmers. A key question is whether earlier curatorial decisions increase the likelihood of later ones. Another is whether the curation system is inflected toward certain music production regions.

The 'No Genius' Assumption

It is assumed here that music curators derive their uncertainty-lowering abilities from their position within the division of labor, not from any genius for spotting talent. They may be better at processing information than the average worker, or they may have other traits that make them suited for the other demands of their job (reviewers may be good writers, A&R reps may have higher alcohol tolerance), but their ability to lower the uncertainty of their clients is mainly a function of their structural position, specifically when they curate.

If curators did have preternatural talents, then we might expect the earlier curators in Figure 4.1 to be the most talented, because this is where there are the fewest curation signals, and thus where one's natural acumen will go the farthest. This would in turn suggest that as curators advance in their careers and gain more knowledge, they will move 'earlier' in the curation relay. The opposite is in fact true. Older curators tend to occupy later positions, where they are more insulated from the risks associated with symbolic judgement.

In the current 'no genius' model, a curator chooses where to position themself in the chain depending on their risk tolerance. Executives at labels and festivals abide risk the least because they must commit substantial capital to producers. They will therefore insulate themselves somewhat by consuming the curation signals of A&Rs which look for them, agents and advanced curators who do not incur the same downside risks when they choose incorrectly. Similarly, the average consumer, who must commit time, cognitive processing power and/or budget to music, also protects themself behind labels, intermediaries, and opinion leaders. The final consumer is mostly a buyer of curation, while the first curator tends to sell it.

Early music curators will accept lower probabilities of choosing "the right" act or song because they are after a larger payoff for being correct on some of their bets. For A&Rs, the payoff might be an opportunity to rise in an organization (mostly the A&R position is at the middle management level). For

agents, finding the high-quality act early can lead to a long and profitable revenue source and reputational effects. For opinion leaders, there are likely intrinsic rewards attached to heavy consumption and perhaps social status and psychic benefits (Winter and Neubaum, 2016). A market for curation is easy to explain if one accepts that there are different sensitivities to its risks or benefits.

There is a recursive dimension to curation. All curators are consumers of music in some sense and will prefer curated products. An A&R might scout out a local music scene by seeing who is booked at its biggest club, a local club booker may rely on a nearby musician or bar owner for a tip, and so on. Similarly, music critics and other intermediaries will look to all previous curation sources, not just labels, for cues about what is valuable and what is worth considering. In sum, the desire to acquire insurance for musical consumption in the form of curation, is very powerful. It is this inclination, much more than natural genius or acumen, that then allows curation to lower symbolic uncertainty. This leads directly to the first hypothesis of the study.

Hypothesis 1 Prior curation predicts future curation and popularity.

The most salient implication of serialized curation, as described above and illustrated in Figure 6.1, is that prior curation will tend to predict future curation, and future curation will tend to predict consumption. This is a version of preferential attachment (Newman, 2001). Put differently, curation outputs will tend to end up as curation inputs. Such a system can function precisely because curation signals are quasi-public goods. This in turn points to a simple corollary for the music industry: music acts which have been curated at time T will have a higher-than-average probability of selection at T +1, and a higher likelihood of being chosen by final consumers. Curation begets curation and consumption. A key feature of any study testing this hypothesis will be the way in which it deals with the possibility that curated acts are also innately superior.

Hypothesis 2 Curated acts are more likely to be drawn from the curator's environment.

Chapter 5 describes why the local context of a curator can play an outsize role in the products that a curator will select. Most simply, acts are inputs into curation, and the costs attached to finding acts are lower for

local acts than for those that are farther afield. One reason is that the search technology available for local acts includes face to face discovery and inspection, and this format is qualitatively better from the standpoint of screening and inspecting (Storper and Venables, 2004). There is also increased opportunity for spontaneous or serendipitous encounters, an aspect of the local milieu that was discussed by Jacobs (1970) and figures prominently (perhaps excessively so) in discussions about how learning happens in local clusters and industrial districts (Saxenian, 1994).

There are less obvious explanations, from the perspective of economic geography theory. For instance, in an environment where the curation decisions of others are recruited as inputs into one's own curation, a local bias in curation will be magnified. If we make the extreme assumption that each curator has a completely random consideration set of musicians that is sampled from the entire universe of musicians, and also a set of local musicians that they are connected to through their personal network, then over time the personal network's influence on the common consideration set will become magnified as each curator's signals are incorporated later in the relay. Moreover, to the extent that geographically correlated sensibilities — community senses (Wohl, 2015) — exist, local curators will be more inclined to approve of local producers with whom they share a sensibility. As an example, Kansas City Jazz is associated with more soloing and Bluesier structure, and critics from Kansas City should themselves be more accustomed to these conventions when they review music.

This implies that two identical products will have different probabilities of selection depending on the local density of relevant curators. Products nearby curators will have a higher chance of being selected because they pay lower costs for curator attention and because they are more likely to conform to curator standards.

Hypothesis 3 Acts from established music clusters realize a place premium to selection.

Because curation occurs under conditions of high uncertainty and information overload, it is best described as satisficing and heuristic-dependent. One heuristic proposed in Chapter 5 is a place premium whereby products from certain environments, be those curation services or music products, are assumed to be of higher quality. In the music context, this would mean that acts from established music scenes — Los

Angeles, New York, and London for popular music, Nashville for country music — enjoy brand-name type benefits in the form of a higher probability of selection.

There are at least two ways that such a premium could be detected empirically. The first would be the observation that iconic, historically-significant music scenes are selected at a higher rate. These would include those listed above, and perhaps also Detroit ('Motown'), New Orleans, Kingston, and Seattle (Power and Hallenkreutz, 2006). If the place premium is not present in these more extreme cases, then it is likely not very relevant.

A very different approach would be to test for a home market effect along the lines of Krugman (1980), whereby areas that have a high number of music festivals tend to export more to music festivals. Here the premium would have a more modern origin, the idea being that scenes with more developed music infrastructures (as evidenced by their number of major festivals) have higher quality acts on average.

Study Data

These hypotheses are investigated through a quasi-experimental study of musicians between 2017 and 2019. The investigation combines several novel datasets which track music acts, music festival curation, other relevant forms of curation, and act popularity. The data is summarized in Table 6.1.

Table 6.1 Summary of Study Datasets

Dataset	Relevant Construct	Years	Observation Count	Source	Compiler
Major Music Festival Lineups	Music Festival Curation	1999–2019	77,652 Announced Performances 27,000 Acts 1,135 Festival Editions 237 Festivals	Festival Websites	Adler
SXSW Musicians	Music Festival Curation/Geography	2014–2016	7,456 Announced Performances 6,301 Acts	SXSW, YouTube, Band Pages	Operation Every Band
Music Acts With Facebook Profiles	Music Act Population/Geography/Popularity	2016	4,040 Acts	Facebook	Adler
Music Acts with Soundcloud Profiles	Music Act Population/Geography/Popularity	2019	317,493 Acts	Soundcloud	Adler
All Music Reviews	Music Curation	2000–2019	135,000 Albums 59,292 Acts	All Music	Adler
Metacritic	Music Curation	2000–2019	198,236 Reviews 134 Outlets 8,109 Acts	Metacritic	Adler
Pitchfork	Music Curation	1999–2019	21,715 Reviews 9,820 Acts	Pitchfork	Adler
Google Trends	Music Act Popularity	2016–2019	10,000 Acts	Google	Adler

The key outcome variable in this study is selection to a music festival between 2017 and 2019. Most of the outcome data comes from a dataset of music festival lineups. Table 6.2 shows the number of announced performances (which will also be referred to as festival slots) during this period, by genre. Most of the sample comes from large, multi-genre music festivals — that is, festivals that do not market themselves to a particular genre and are held at venues with a minimum 10,000 person capacity. There are also observations from genre-specific festivals like Ultra (Electronic) or Stagecoach (Country). Every effort has been made to ensure that the multi-genre sample represents the full population of large US-based multigene music festivals. Festivals were identified using directories like Music Festival Wizard (formerly Music Festival Junkies), trade publications like PollStar, and the roster of Live Nation, AEG, and Insomniac festival properties. In addition, major AEG/Multigenre Festivals from abroad were included in the sample.

Table 6.2: Summary of Festival Performances in Experimental Sample

Year	Large Multi-Genre	Americana/ Bluegrass	Electronic	Rock/Hard Rock	Country	Jam/Psych/ Roots	Hip Hop	Total
2017	3,905	213	1,097	631	469	100	158	6,573
2018	4,441	230	1,009	530	320	412	137	7,079
2019	6,166	291	1,260	516	389	640	215	9,477
Total	14,512	734	3,366	1,677	1,178	1,152	510	23,129

Data related to the geographic origin of acts comes from social media scraping in 2016 (Facebook) and 2019 (Soundcloud) as well as a crowd-sourced data collection effort "Operation Every Band" (OEB), which seeks to profile every band that performs at the South by Southwest music festival. In the Facebook scrape, information was retrieved from artists' pages, including artists' current locations and the number of 'likes' granted to a list of acts who were selected to major music festivals in 2013 and 2016, as a well as a random selection of acts. 2,023 observations from the festival sample and 2,017 from the random sample were successfully collected. The Soundcloud scrape contains 11,203 acts from festival artists between 2017 and 2019 as well as 306,470 acts from two separate control groups, one a strictly random group and another a group of acts whose names also appear in the BMI song writing repertoire (and can all be assumed to

have a higher level of organization/professionalism than a random artist with a profile). The OEB database has geographic info for every SXSW act in the years listed.

Metro origins were identified for 54.47% of the sample. To determine whether there was bias to regional identification, geographies for an additional 200 acts were collected using deeper internet research. The two samples were not significantly different from each other (i.e., an act was just as likely to be drawn from NY or LA in the experimental sample as in the verification sample).

The sampling method described here is vulnerable to critique along at least two lines:

- It does not fully reflect the geographic location of an act when it is programmed for a festival. If an act moves between Washington and Dallas between 2016 and 2018, but only Facebook information is available, then it will still be coded as a Washington act in 2018 and 2019.
- It relies on a mutually exclusive coding of the act scene. Acts with members from multiple regional scenes will be represented as coming from only one, either the single scene that is listed on its social media profile, or in cases where multiple scenes are listed (i.e., "New York/London"), the first scene listed.

Despite these imperfections, the dataset is superior to standard occupational surveys, in that it is international in coverage, contains data from professionals and amateurs, and data on the relative popularity of each artist. This dataset is unusual in that it permits the study of international trade flows for creative services.

Data on music curation comes from music review outlets, including the All Music Guide, which is a major catalog of music albums, Pitchfork, which is a more targeted and high-status music website, and Metacritic, which is an aggregator of reviews from major critical outlets. These sources provide information on the presence of curation signals (i.e., whether an act is featured by an outlet) as well as the quality of recorded musical products (review scores). In each case, scores are normalized on a common scale (5 for All Music, 10 for Pitchfork, 100 for Metacritic). All Music and Metacritic data also contain variables on user reviews, including the number of reviews and scores.

The final relevant data relates to the popularity of a given act. Act popularity represents a possible non-curation cause of festival selection. It also might be presumed to be associated with an act's natural talent or quality. The study exploits three measures of popularity: the number of likes on an act's Facebook page in 2016, the number of followers on an act's Soundcloud Page in Summer 2019, and an act's normalized popularity according to Google Trends.

Study Design

The study is pursued at the individual act, festival, and regional levels. Act-based studies allow for the observation of the importance of curation, curatorial context, and provenance relative to the larger population of musicians who are not selected. Festival-based studies permit the measurement of the relationship between programmer/festival characteristics and curation. Metro-based studies allow for a region's gross export activity to be calculated.

Key to the study is a population of musicians who are actors in the music festival market but, for reasons that are to be clarified, are not exported to other areas. Again, this is an improvement over official trade statistics like those available from the International Trade Administration, which simply aggregate the products that do get traded. The control group consists of one of four populations of music acts: randomly selected acts from Facebook in 2016, randomly selected acts from Soundcloud in 2019, acts that played at South by Southwest between 2014 and 2016, or acts that are listed in the music festival dataset but do not happen to make a type of festival in question. The designation of these acts as controls implies that they would play at a music festival if invited. This assumption is the most speculative in the case of the randomly chosen acts from Facebook and social media, less so in the case of randomly selected BMI musicians, and even less so in the case of acts that have played at music festivals previously. Analyses are repeated across multiple control groups and results are mostly robust across each group. In addition, act popularity prior to festival curation is used to compare acts in different groups and from different regions on a more even footing.

A fully experimental study would require music acts to be screened based on whether they would play at a festival, and then randomly assigned curation/and or geographic scenes. We should not expect

such evidence to ever materialize. Other common quasi-experimental approaches include regression discontinuity and differencing, but neither of these are possible given the structure and frequency of the data.

Instead, estimates are derived through negative binomial (individual level) and ordinary least squares (metro level) regression analyses, where the analysis determines whether — controlling for appropriate features — the control and experimental groups can be differentiated based on treatments, where the treatments are all the forms of curation that are described in Chapter 5. Figure 6.3 illustrates the basic regression strategy guiding this study. Results from such an analysis are greatly preferable to those that would be obtained strictly descriptively because they attempt to control for non-curation factors that might explain confirmatory results. I nonetheless include descriptive results because they offer a more vivid picture of the economic geography of music festival acts.

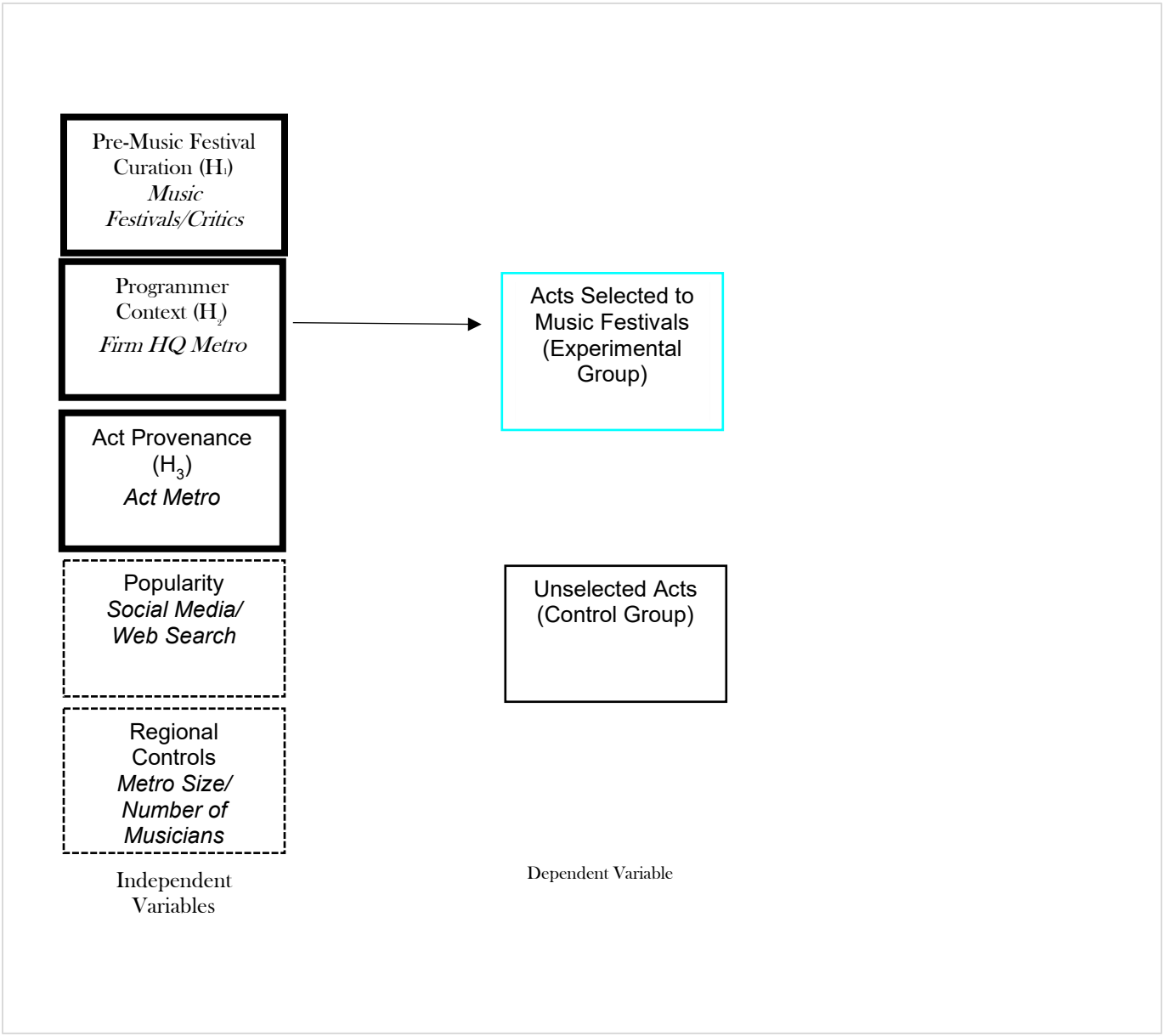
The selected control variables vary by level. At the act level, act popularity is a believable indicator of act quality, which might work via non-curatorial channels to determine who gets chosen. How to measure quality is one of the thorniest aspects of this research design.

In their case study of the Primavera music festival, Montoro-Pons and Cuadrado-García (2020) conceive of music festivals as sites of information spillover that create awareness of good acts. They use Google Trends data to divine the impact of festivals on popularity through this information mechanism. Their empirical strategy relies on the assumption that good acts are already formed, and that festivals speed the diffusion of information about good acts.

The present study begins from a different place: with the assumption that "good acts" are to some extent forged through series of curation decisions (like selection to Primavera). In this case, identification is more difficult, because curation should be affected both by prior curation and internal band characteristics such as melodiousness, virtuosity, and work ethic. In the Salganik et al. study, the very best and very worst acts were identifiable under conditions of no social influence. Given a sample of acts, some component of overall popularity should be attributable to this 'vacuum-tested' quality. Rather than attempt to distinguish among these types of quality, the goal of the regression exercises is to account for the relative influence of

discrete curation decisions at time T—1 on curation at time T, controlling for unobserved quality prior to T—1. In other words, curation prior to the study period is not factored into a discussion of hypotheses.

Figure 6.3 Research Design



This strategy relies on the assumption that non-social quality is relatively stable inter-temporally when compared to an act's curatorial stature. An act that is selected to Primavera at T—1 has the same "in a vacuum" characteristics at T but grows in terms of its social value. Practically speaking, this might not be

entirely true. Objective quality should improve over time, if only through experience, fortunately this would be true of all groups and not be biased toward the control or experimental group.

At the metro level, the population of acts in the curator's area is taken as a proxy for the size of the festival programmer's 'sampling frame'. One necessary condition for realizing a place premium would be for regions to export more acts to music festivals than their number of acts would predict. This is like saying that the location quotient for music festival performances is above one.

V Results

Hypothesis 1 Prior curation predicts future curation and popularity.

We begin with a discussion of whether prior curation is associated with curation during the study period. At the outset, it is useful to consider the distribution of performances in the dataset among the small number of acts that performed. Figure 6.4 captures this with a boxplot. The median act performs three times, once per year, but there is a pronounced degree of skewness whereby the average performer performs 5.7 times. This pattern points to a degree of inequality or 'superstardom' among the population of festival performers.

Figure 6.4 The Distribution of In-Sample Festival Performances by Act

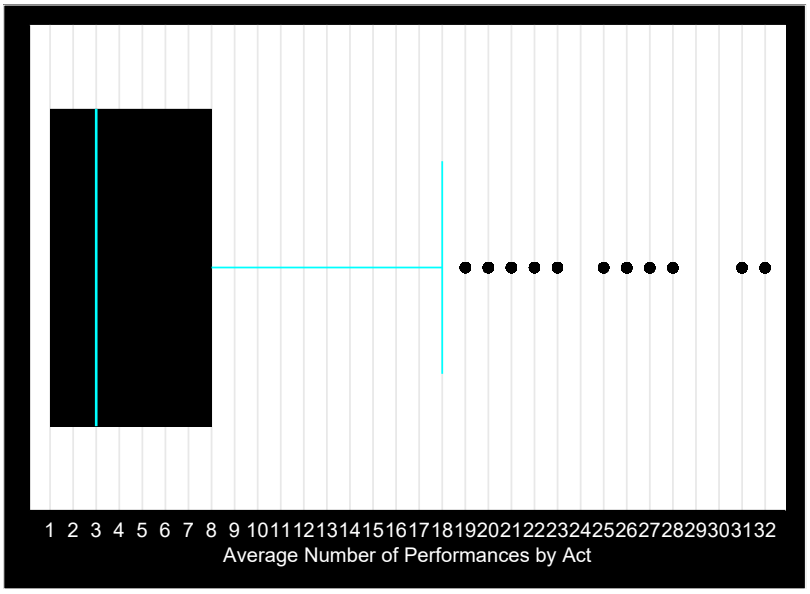


Table 6.3 shows the degree to which festivals rely on each other's acts. More than half of all performances across festivals were by prolific performers — that is, performers who performed at more than ten festivals during the study period, and forty percent were from performers who performed at between four and nine. These trends were even stronger at the corporate music festivals, promoted by Live Nation and AEG.

Table 6.3 The Concentration of Festival Performances Among Artists by Festival Type

Category	All Festivals	Live Nation	AEG	Other Promoters
10 or More	50.8%	60.0%	55.7%	48.5%
Two through Nine	44.1%	36.4%	41.67%	44.9%
One Festival Only	5.1%	3.6%	2.7%	6.6%

Table 6.4 decomposes, by genre, the average share of acts at each festival that had previously performed within the sample. Across genres, there is a very strong tendency for acts to be recycled from festival to festival. This is most pronounced in Country and Rock — two genres that tend to have higher production values for festival performances — and least pronounced for Jam and Americana acts.

Table 6.4 The Share of a Festival's Artists Who Had Performed In-Sample Before, By Genre

Genre	Festivals in Sample	% Before	% 2016
Country	37	79.6%	56.0%
Rock/Hard Rock	32	71.9%	45.8%
Multi-Genre	237	68.3%	50.8%
All Genres	410	68.3%	50.8%
Electronic	49	66.5%	56.4%
Hip Hop	18	64.0%	47.9%
Americana/Bluegrass	13	60.1%	48.3%
Jam/Psych/Roots	24	56.5%	41.2%

These results imply that festival promoters tend to share music acts within the study period. It is worth noting that such a distribution is not mathematically pre-destined. 23,130 performances took place during the study period, well less than the 58,000 professional musicians and performers employed in America alone in 2016 (BLS, 2016). When we consider that the study tracks three years' worth of acts, that

semi-professional musicians do perform at music festivals, and that international acts do too, we can conclude that the number of available musicians well exceeds the number of available performance opportunities. Only 3.8% of acts that played at South by Southwest before 2017 show up in the sample of major music festivals. This implies that not even most of the top decile of acts at that festival were promoted to subsequent festivals.

We turn to a set of negative binomial regression estimates (Table 6.5) to explore the sources of this superstardom, focusing on whether it can be connected to a system of serialized curation whereby social forces designate some acts as special. Under the curation explanation, an act curated by random by festivals prior to the experimental period will tend to be curated by later festivals, regardless of its level of talent. The dependent variable in these models is the count of major multi-genre festivals that an act was programmed at between 2017 and 2019.

Acts the in the sample were standardized based on their Facebook popularity (number of likes) as of January 2016. The positive effect of Facebook popularity alone on the probability of performing at multi-genre festivals is reported in Column 1. For every 100,000 followers in 2016, there is a .01 increase in the odds of being selected for a festival. Facebook popularity is treated as a control in this analysis, a term that captures any differences in act quality that would be apparent under no social pressure at all. Of course, Facebook popularity itself may reflect both objective quality and social/curation processes outside of the study, and as a result this study may underestimate the total importance of curation.

Table 6.5 Regression Results – The Effect of Curation on Curation

DV: Count of Multi-Genre Festivals 2017–2019	(1) Facebook Popularity	(2) Record Label	(3) Festival Curation	(4) Criticism	(5) All Curation 1	(6) All Curation 2
100k Facebook Followers	0.01***	0.01***	0.00***	0.01***	0.002***	0.003***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Represented by Music Label in 2016?		0.63***			−0.08	−0.15
					(0.13)	(0.19)
Represented by Major Label?		0.42***			−0.03	−0.01
					(0.09)	(0.12)
All Multi-Genre Exports, 2016			0.31***		0.28***	0.29***
			(0.02)		(0.02)	(0.03)
Elite Multi-Genre Exports, 2016			−0.15**		−0.12	−0.17
			(0.07)		(0.07)	(0.07)
Hometown Festivals 2016			0.03***		0.03***	0.03***
			(0.01)		(0.01)	(0.01)
Reviewed by All Music Guide, 2016?				0.81***	0.12	0.03
				(0.16)	(0.10)	(0.13)
Reviewed by Pitchfork, 2016?				0.66*		
				(0.35)		
Pitchfork Score, 2016?				0.14**	0.09***	0.07***
				(0.06)	(0.01)	(0.02)
Act Google Popularity 2016						0.02**
_cons	−0.59***	−1.19***	0.08*	−0.85***	(0.00)	0.04
	(0.04)	(0.15)	(0.05)	(0.04)	−0.08	(0.19)
inflate:_cons	−15.86	−14.75	−24.25	−16.44	(0.13)	−19.44
	(887.34)	(516.74)	(15160.19)	(700.75)	−0.03	(1938.61)
/lnalpha	2.04***	1.93***	−0.09	1.86***	(0.09)	−0.40***
	(0.04)	(0.05)	(0.06)	(0.04)	0.28***	(0.11)
Obs.	5784	4390	1821	5784	1412	714

Standard errors are in parenthesis
*** p<0.01, ** p<0.05, * p<0.1

The association between festival curation and traditional curation via record labels is reported next. Artists represented by record labels are selected to more festivals, and acts that are represented by major labels are even more so. This is consistent with the hypothesis that acts are valorized by the signal of being signed, especially by a major label.

The next analysis ponders the effect of various festival-related curation models — that is, whether being programmed to an earlier festival signals act quality to programmers at later festivals. Each festival export in 2016 (i.e., when an act was programmed at a festival outside of the home region) is associated with .31 more festival slots in the sample period. The count of local performances in an artist's region is itself significantly associated with festival count. The number of very popular festivals (Coachella, Glastonbury, Bonnaroo, Lollapalooza, Outside Lands, Ultra) in 2016 is negatively associated with overall count in 2017-2019, controlling for the other factors.

These results point to a festival curation effect that, while smaller than the label effect, is still significant. Acts of the same level of popularity that are selected to festivals in 2016 are more likely to be selected later. The presence of both a home-market and export result ensure that the result is not simply driven by acts that were widely popular. Simply being selected to a major hometown festival seems to be related to later curation. The negative major festival coefficient may reflect a career development effect. Perhaps artists are less likely to perform at average festivals (i.e., in the entire sample) once they have performed at higher status ones. The criticism model finds that selection to the All Music Guide and Pitchfork are significantly associated with programming, and that Pitchfork score is also correlated with it, all controlling for popularity.

Models 5 and 6 consider the relative associations of Label, Festival and Critical curation in an integrated model. In 5, prior festival curation remains significant and predictive, as does popularity on Facebook and the number of hometown festivals and Pitchbook score. Music label curation and the presence of music reviews and elite festival performances are no longer significant. The same pattern emerges when another popularity control (act Google Trends popularity) is added in Model 5. The most straightforward interpretation of these results is that label representation, festival curation and critical attention are highly related to each other, and so independent associations for each will not be detectable. On the other hand, critical score is somewhat orthogonal to these other forms of curation and adds explanatory power to the combined model.

The message of all models is that prior curation in various forms is associated with curation in the present, even among acts that are similarly popular. Whether this approach demonstrates a curation effect net of act quality depends on how well the popularity measures proxy for the same. The addition of a popularity measure in 6 is supposed to address this, somewhat, but it would probably not be enough to satisfy someone who believes that 'the best' acts generally tend to be found by music markets, and who see curation entirely as search for the best acts.

The next estimates consider the association between curation in 2016 and popularity in 2019, based on an act's total number of Soundcloud followers (Table 6.6). This allows us to see whether selection to festivals is important generally in a musician's' career, and not just in their career as a festival performer.

Facebook popularity is itself significantly predictive, as are label representation and festival curation. Of course, this evidence does not suggest that these things cause selection, but they are consistent with such intuition. Music criticism is not associated with selection, however. This result then conforms to the idea that critical and popular success are separate. Label representation is positively and significantly associated with popularity, but major label representation is negatively and significantly so. Selection to elite festivals is negatively associated with popularity. In the full model, the simple representation term becomes insignificant, and the effect of major labels remains negative. Positive Pitchfork scores are associated with selection in the full model, but not the curation-only one. Thus, prior festival curation is not only related to curation at other festivals, but also general popularity.

It is hypothesized that already curated acts are more likely to be curated later because curation acts as a "judgement device" (Karpik, 2011) that allows programmers to lower uncertainty. Curation is understood to be a socially based source of value. This runs up against a competing hypothesis, which is that there are innate act-level differences that explain which acts are sorted to festivals and which are not. As high-quality acts are discovered, they are more likely to be selected. Festival programming acts as a means for diffusion of information about good acts. In this case, we would not expect for curation to be as significant for low quality acts. Here we consider additional ways to sort through these competing explanations.

Table 6.6 Regression Results – The Effect of Curation on Popularity

DV: Soundcloud Followers in 2019	(1) Facebook Popularity	(2) Record Label	(3) Festival Curation	(4) Criticism	(5) All Curation
100k Facebook Followers	0.05***	0.05***	0.02***	0.05***	0.02***
	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
Represented by Music Label in 2016?		0.60***			0.53
		(0.23)			(0.46)
Represented by Major Label?		−1.04***			−1.05***
		(0.23)			(0.29)
All Multi-Genre Exports, 2016			0.43***		0.60***
			(0.09)		(0.12)
Elite Multi-Genre Exports, 2016			−0.56**		−0.93***
			(0.24)		(0.32)
Hometown Festivals 2016			0.05*		0.06**
			(0.03)		(0.03)
Reviewed by All Music Guide, 2016?				−0.25	−0.52
				(0.26)	(0.39)
Reviewed by Pitchfork, 2016?				0.40	
				(0.76)	
Pitchfork Score in 2016?				0.11	0.09*
				(0.12)	(0.05)
_cons	10.40***	9.90***	11.04***	10.33***	10.07***
	(0.09)	(0.23)	(0.18)	(0.09)	(0.48)
inflate:_cons	−0.15*	−0.11	0.28***	−0.12	0.19***
	(0.09)	(0.09)	(0.06)	(0.08)	(0.07)
/lnalpha	2.38***	2.32***	1.78***	2.35***	1.73***
	(0.07)	(0.08)	(0.07)	(0.07)	(0.08)
Obs.	5784	4390	1821	5784	1412

Standard errors are in parenthesis
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Elite multi-genre festivals and major labels are negatively associated with popularity on SoundCloud in their respective models. At this stage, it is hard to know what is driving these relationships but selection into Soundcloud is an obvious hypothesis. Soundcloud is a newer form of music consumption with a younger clientele. To the extent that Soundcloud consumers prefer artists off major labels or ones not popular enough to be at major festivals, then we might expect these negative and significant relationships. At

any rate, it is important to keep in mind that Soundcloud, Major Labels and Major Festivals are not fully overlapping systems.

Table 6.7 The Effect of Curation on Popularity Among Less Popular Acts

DV: Count of Multi-Genre Festivals 2017–2019	(1) Facebook Popularity	(2) Record Label	(3) Festival Curation	(4) Criticism	(5) Full
100k Facebook Followers	0.03***	0.02***	0.00***	0.03***	0.0002***
	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
Represented by Music Label in 2016?		1.18***			0.43**
		(0.21)			(0.18)
Represented by Major Label?		0.72***			0.07
		(0.20)			(0.12)
All Multi-Genre Exports, 2016			0.31***		0.29***
			(0.03)		(0.03)
Elite Multi-Genre Exports, 2016			–0.24**		–0.15
			(0.10)		(0.12)
Hometown Festivals 2016			0.02		0.04***
			(0.01)		(0.01)
Reviewed by All Music Guide, 2016?				1.02***	0.01
				(0.21)	(0.12)
Reviewed by Pitchfork, 2016?				0.92*	
				(0.48)	
Pitchfork Score in 2016?				0.11	0.08***
Facebook100k				(0.08)	(0.02)
	–0.78***	–1.96***	0.05	–1.03***	–0.50***
	(0.06)	(0.20)	(0.06)	(0.06)	(0.19)
inflate:_cons	–13.67	–15.37	–22.29	–15.70	–29.15
	(627.38)	(906.98)	(6846.52)	(661.16)	(260626.49)
/lnalpha	2.05***	1.92***	–0.05	1.88***	–0.27***
	(0.06)	(0.07)	(0.08)	(0.06)	(0.10)
Obs.	3792	2858	1160	3792	872

Figure 6.7 reports on the initial analysis among the least popular half of acts in 2019, based on Soundcloud followers. If we assume that quality and popularity are correlated, and that high quality acts will tend to be discovered over three years, these estimates come closer to seeing whether curation improves the

likelihood that low-quality acts will be selected to festivals in the study period. Again, we find evidence that 2016 festival curation is associated with 2017—2019 curation. Pitchfork scores are also related to selection.

Additional corroborative evidence of a causal role for curation comes from an analysis of festival curation over the course of the year (Table 6.8). If curation was simply a learning process, then we would not expect to find pronounced herding within a given year. Under such conditions, if a March programmer found out about a "good act" in December, then they would be more likely to program them in the following year. Herding would not have a temporal signature, and mimicry would be persistent over the course of the year.

Table 6.8 Share of Month's Acts by Act Type

Festival Month	One Festival Acts	Two	Three Or More
February	50.4%	19.8%	29.8%
March	77.7%	9.6%	12.7%
April	55.0%	12.7%	32.4%
May	37.7%	18.0%	44.4%
June	33.4%	20.2%	46.3%
July	46.6%	17.5%	35.9%
August	19.9%	15.3%	64.7%
September	49.3%	15.9%	34.9%
October	24.1%	16.8%	59.1%
November	1.5%	28.0%	70.5%

In fact, later festivals are more likely to have acts that have performed or will perform at multiple festivals in the same calendar year. They are more likely to select from the current pool of festival artists than to add to that pool. This is most striking in March when SXSW takes place. Most of that festival's 2,000 or so performers will not perform again, but it is also true of other early festivals and November programmers who rely the most on recycled artists. Because high quality acts can perform in consecutive years (and regularly do), the existence of herding within a year would suggest that something beyond act quality is driving the convergence of programmers on acts. A more satisfying explanation would be that festival programmers identify 'hot' or 'buzzworthy' acts early in the year, converge on them later in the year

and restart again in the new year after the previous year's *best of* lists and awards have been decided. A quality-based explanation for this pattern would need to explain why the better acts perform in November, a month that does not have major music festivals, and not the summer months, when the marquee festivals tend to be scheduled.

Hypothesis 2 Curated acts are more likely to be drawn from the curator's environment.

We now discuss relationships at the programmer level, focusing on whether programmer context is related to festival lineup decisions. The dataset permits us to see how different firms (promoters) react differently to their organizational and geographical settings. Here, 'local context' takes three forms: the firm, the local region that the curator is based in, and the festival itself.

Table 6.9 suggests that local firm context does matter. It shows in the first column the share of festival performers in 2017—2019 that had performed for the same promoter before 2017. The second column shows the share of other promotion's acts that had previously performed for the promotion, and the third shows the ratio between these. The list of promoters represents all promoters who promote at least 4 festivals in each year of 2017—2019 and in different regions. Insomniac is listed separately, even though it was purchased by Live Nation in 2014, because it maintains its own offices and staff.

Table 6.9 Share of Promoter Lineups that Have Already Performed for Promoter

Promoter	Same Promotion	Other Promotions	Ratio	Promoter Share of Sample
Insomniac	49.4%	8.8%	560.5%	5.9%
React	35.9%	7.0%	512.7%	1.7%
Lollapalooza	32.1%	11.6%	277.8%	4.5%
Superfly	27.4%	12.8%	214.5%	2.2%
AEG	42.8%	29.0%	147.3%	11.7%
LN	63.2%	67.8%	93.2%	35.3%

Mostly, these prolific promoters are more likely to program acts in 2017-2019 that had already been programmed before than other promotions are to promote those same acts. The exception is Live Nation. Other promotions recycle Live Nation acts from before 2017 more than the promotion itself. However, given that a full 63% of acts had come before, it seems that recycling within the company is still

strong in absolute terms.

The programmer's presumed home region is similarly associated with selection decisions. Table 6.10 shows the share of festival lineups at locally promoted and non-locally promoted festivals. Therefore .7% of lineups selected by Las-Vegas based promoters are from Las Vegas acts, compared to .1% for festivals programmed by non-Las Vegas promoters. Each area promotes at least four festivals in the sample.

We see that in each case, an act has a greater likelihood of being selected to festivals promoted from their home area. There is home market advantage, in keeping with Chapter 5's intuition that search is locally biased. Costs, in addition to search costs, might also explain a home-bias but there are two reasons to think that this is about search. First, most promoters in the same promote festivals outside of their home metro, so in that case the local act would not be cheapest. More importantly, we see that the home bias effect varies across space, and not with costs. This tendency is weakest in New York, Los Angeles, and London, where the home market effect is still more than 50%. It is strongest in Las Vegas, which exports a miniscule number of acts to foreign festivals, but also in Canada, where the music industry is bolstered by federal support of Canadian musicians.

These measures are indirect. They are proxies for what the presumed programmer region is, based on the headquarters of the home firm. They do not precisely account for where each programmer is based. However, it stands to reason that there will be some anchoring for each programmer to the home region of their firm. The headquarters region tends to be where high-level strategic decisions are made, as well as where firm knowledge is collected. It is also, presumably, an area that commands the presence of all key firm personnel (Adler and Florida, 2020). Moreover, most promotions are not major corporate concerns with multiple offices. The headquarters office is usually *the* office.

Table 6.10 Share of Region's Acts at Local Promoted and Non Local Festivals

Act Home	Local Promoters	Non-local Promoters	Ratio
Las Vegas	0.7%	0.1%	11.8
Canada	11.8%	1.3%	8.9
Miami	2.9%	0.4%	8.2
San Francisco	4.4%	1.3%	3.5
UK	12.1%	3.7%	3.3
Austin	6.9%	2.2%	3.1
Chicago	11.3%	3.6%	3.1
New York	7.4%	3.7%	2.0
Los Angeles	9.7%	5.7%	1.7
NY/LON/LA	17.3%	11.4%	1.5

Perhaps the most cognitively available kind of act for a programmer is an act that has been previously performed at a festival. Table 6.11 shows the relationship between festival programs and prior curation, by curation type, for each genre. Across all genres: 1 in 5 acts at 2017-2019 festivals had already performed at the festival before 2017, 5% were from the home region, 11.5% had already performed for the same promoter, 22% had performed at the South by Southwest Music Festival, 39% had been reviewed by the All Music Guide, and 20% had been reviewed by Pitchfork. More than half had been curated in at least one way. The curation tendency was weakest in Jam and Americana festivals, and strongest in Hip Hop.

Table 6.11 Curation of 2017–2019 Festival Acts, by Curation Type

Genre	Performed at Same Festival	From Festival Region	Performed for Same Promoter	Performed at SXSW	Reviewed by All Music	Reviewed by Pitchfork	All
Hip Hop	47.6%	5.1%	13.7%	28.4%	36.1%	47.6%	72.7%
Multi-genre	25.8%	4.5%	12.0%	27.2%	41.7%	25.8%	55.1%
Rock/Hard Rock	14.0%	2.2%	8.9%	11.7%	61.4%	14.0%	54.2%
Country	1.6%	8.7%	5.9%	11.3%	51.7%	1.6%	53.7%
All Genres	***19.4%***	***5.1%***	***11.5%***	***22.4%***	***39.5%***	***20.1%***	***52.6%***
Electronic	7.4%	6.2%	17.8%	16.1%	23.5%	7.4%	48.8%
Americana/Bluegrass	11.3%	12.7%	1.5%	14.7%	28.6%	11.3%	39.6%
Jam/Psych/Roots	5.7%	4.9%	2.4%	10.4%	22.0%	5.7%	29.1%

Having established suggestive descriptive results, we turn to a quasi-experimental analysis that seeks to predict the likelihood of being selected to a festival during the study period. The treatment condition

here is selection of an act to a festival between 2017 and 2019, and the independent variables are popularity controls and various forms of curation. These estimates are based on logistic regression models and will therefore be significantly less affected by superstar artists who are selected to very many festivals. The central concern is the identification of conditions that are associated with selection from the undifferentiated sea of Facebook in 2016 to a major festival.

Table 6.12: The Relative Effect of Label and Non-Label Curation on All Festival Selection

DV: All Festival Selection 2017–2019	(1) Facebook Popularity	(2) Record Label	(3) Curation	(4) Simple Model	(5) Full Model
Facebook Followers (log)	0.45***	0.44***	0.18***	0.09***	0.18***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Represented by Music Label in 2016		0.14		−0.08	−0.31***
		(0.10)		(0.14)	(0.07)
Represented by Major Label		0.52***		0.15	
		(0.10)		(0.15)	
Performed for Festival Before			2.07***		2.06***
			(0.12)		(0.12)
Performed for Promoter Before 2017			0.53***		0.53***
			(0.15)		(0.15)
Performed at SXSW before 2017			2.25***		2.24***
			(0.10)		(0.10)
Reviewed by All Music Before 2017			2.52***		2.56***
			(0.10)		(0.10)
Reviewed by Pitchfork Before 2017			0.36***		0.35***
			(0.13)		(0.13)
Any Non-Label Curation				4.21***	
				(0.10)	
Constant	−4.78***	−4.83***	−3.23***	−2.75***	−3.10***
	(0.13)	(0.16)	(0.15)	(0.21)	(0.16)
Obs.	8308	6287	8308	6287	8308
Pseudo R^2	0.17	0.18	0.46	0.53	0.46

Standard errors are in parenthesis
*** p<0.01, ** p<0.05, * p<0.1

Table 6.12 depicts the relationship between label and non-label curation and selection to any festival, given Facebook popularity. We see that, even after controlling for popularity, acts that have been curated in one of the six ways shown in Table 6.14 are much more likely to be selected to festivals, and that this effect is much stronger for the various non label measures than for label representation. Major label representation in 2016 is independently associated with festival selection, the mere presence of a label is not. When label and non-label curation is measured simultaneously, only non-Label measures are significant. If being signed is mostly helpful to performers via its signaling properties, then we would expect major labels to carry stronger associations, because there are fewer of them and they are more prominent.

Table 6.13: The Relative Effect of Label and Non-Label Curation on Multi-Genre Festival Selection

D.V.: Multi-Genre Selection	(1) Facebook Popularity	(2) Record Label	(3) Curation	(4) Simple Model	(5) Full Model
Facebook Followers (log)	0.29***	0.27***	0.09***	−0.03*	0.11***
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)
Represented by Music Label in 2016		0.06		−0.23*	−0.39***
		(0.11)		(0.13)	(0.12)
Represented by Major Label		−0.04		−0.35***	−0.54***
		(0.09)		(0.10)	(0.12)
Performed for Festival Before			−0.15*		−0.24***
			(0.08)		(0.09)
Performed for Promoter Before 2017?			0.33***		0.36***
			(0.10)		(0.11)
Performed at SXSW before 2017			2.24***		2.22***
			(0.07)		(0.08)
Reviewed by All Music Before 201			1.38***		1.45***
			(0.08)		(0.09)
Reviewed by Pitchfork Before 2017			1.10***		1.13***
			(0.09)		(0.10)
Any Non-Label Curation				3.37***	
				(0.09)	
Constant	−3.86***	−3.73***	−3.14***	−2.31***	−2.92***
	(0.12)	(0.15)	(0.15)	(0.18)	(0.19)
Obs.	8308	6287	8308	6287	6287
Pseudo R^2	0.09	0.08	0.35	0.32	0.34

The strongest predictor of festival selection in 2017—2019 is selection by the All Music Guide prior to 2017. This is followed closely by selection to South by Southwest and having performed for the festival before. Acts that have been curated through any of the non-festival means are more likely to be selected, holding label representation and Facebook popularity constant. Represented acts are not significantly more likely to be selected once other types of curation are held constant.

Table 6.13 repeats the exercise for Multi-Genre festivals only. In this model, label representation is not independently associated with selection, and in the joint model it is negatively associated. Represented acts are less likely to be selected to major festivals. In this model, SXSW is most associated with selection, and having performed at the same festival before is negatively associated. Multi-genre festivals appear to be more oriented towards variety than to recycling their acts. However, the positive sign on the promoter term suggests that Multi-Genre promoters do tend to re-use acts.

Table 6.14 captures dynamics with Live Nation. Results mostly match Table 6.13. Major label representation is independently associated with selection, but not once other forms of curation are incorporated. The overall association between curation and selection appears to be weaker than with the full sample. The strongest term is the prior promotion term. One way to interpret these results is to conclude that the firm trusts its own private information (i.e., information from its local environment) more than information available publicly and that, possibly, this includes information that is not correlated with the measures in the model. The local environment for the firm is itself more likely to be local -- if not in a a single area, then in a few places.

Table 6.14: The Relative Effect of Label and Non-Label Curation on Live Nation Festival Selection

D.V.: Live Nation Selection	(1) Facebook Popularity	(2) Record Label	(3) Curation	(4) Simple Model	(5) Full Model
Facebook Followers (log)	0.48***	0.47***	0.33***	0.27***	0.30***
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)
Represented by Music Label in 2016		−0.39***		−0.76***	
		(0.11)		(0.13)	
Represented by Major Label		0.22**		−0.03	−0.11
		(0.10)		(0.11)	(0.11)
Performed for Festival Before			−0.01		0.01
			(0.08)		(0.09)
Performed for Promoter Before 2017			2.03***		1.84***
			(0.13)		(0.14)
Performed at SXSW before 2017			1.09***		0.95***
			(0.07)		(0.08)
Reviewed by All Music Before 2017			0.91***		1.05***
			(0.07)		(0.08)
Reviewed by Pitchfork Before 2017			0.66***		0.72***
			(0.09)		(0.10)
Any Non-Label Curation				2.61***	
				(0.08)	
Constant	−5.87***	−5.40***	−5.18***	−4.39***	−4.92***
	(0.14)	(0.17)	(0.16)	(0.19)	(0.18)
Obs.	8308	6287	8308	6287	6287
Pseudo R^2	0.20	0.19	0.34	0.35	0.32

Standard errors are in parenthesis
*** p<0.01, ** p<0.05, * p<0.1

Together, these models demonstrate strong association between non-label curation and festival selection. They are designed with a sufficient lag so that we can easily imagine some causal mechanism operating forward from the pre-festival period to festival selection. Once again, they do not completely rule out the influence of other possible mechanisms on selection; however, they also do not exhaustively identify the possible kinds of curation that might be operating. A discrete set of curation measurements is mostly associated with curation later. We now seek to better understand the regional export of music festival acts.

Hypothesis 3) Acts from established music clusters realize a place premium to selection.

We conclude with a set of metro-level analyses that reveals and partially explains the regional trade pattern for music festival acts. These speak most directly to economic dynamics among "Creative Cities".

The market for music festival acts, like the market for many other services, features pronounced interregional trading patterns among large cities. There is a tendency for each region to both import and export acts, but some big regions are net exporters and others are net importers. Figure 4.5 captures this, using data from the focal research set of major US festival performances between 2017 and 2019. It shows the net number of festival exports in sample at the metro level for all US regions that export to the sample. Non-US metros are excluded from Figure 6.5 because the festival sample is US only.

The great majority of regions are distributed around zero, indicating near balanced trade. On the far left we see large metros with major music festivals in sample: Las Vegas, Chicago, and to a lesser extent, Atlanta, Miami, New Orleans, and Milwaukee, none of which offset their large number of imports with exports elsewhere. This should not at all be interpreted as a sign that a scene is 'weak', and mostly it indicates the location of major urban fests like Lollapalooza (Chicago), Life is Beautiful (Las Vegas), 'Jazz Fest' (New Orleans), Ultra (Miami) and Shaky Knees (Atlanta). These places may not export acts, but they certainly do generate tourism to these large ~20,000+ person events.

5 music cities do distinguish themselves for carrying large surpluses even as they also stage major festivals: Los Angeles, New York, San Francisco, Dallas, and Nashville. A 6th metro with a surplus, Detroit, does not have a festival in sample, but these five all have at least two festivals in sample and still run surpluses. We might say that music communities here transcend 'scenes' and behave more like industrial clusters of traded services (Porter, 1998). In a music scene, the music industry mainly functions as a local service, and in a cluster, musicians bring revenue from elsewhere.

Figure 6.5 Net Music Festival Exports, Regional Level: 2017-2019

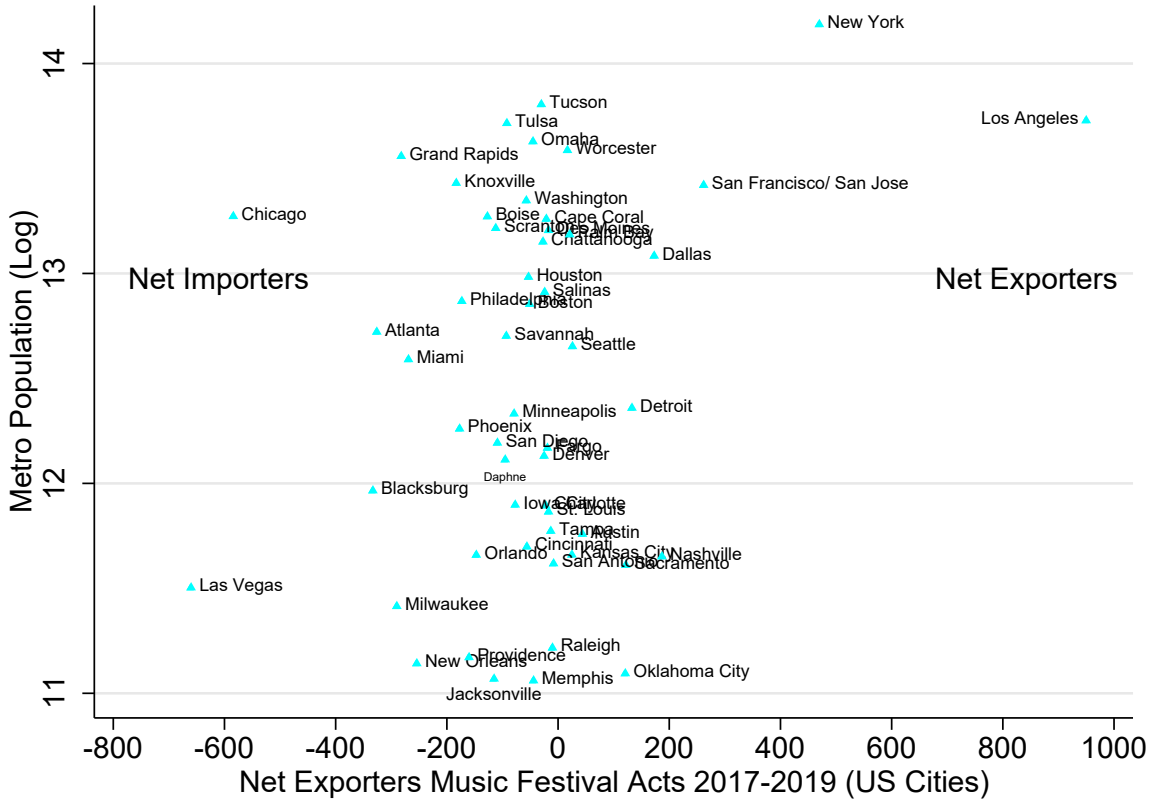


Table 6.15 shows the top regional exporters of music festival performers, including US and international metros, in absolute terms. Again, Los Angeles, New York and Nashville top the list. They are prolific exporters on a net and absolute basis, with per capita rates that are higher than smaller US cities, especially in the case of LA and Nashville.

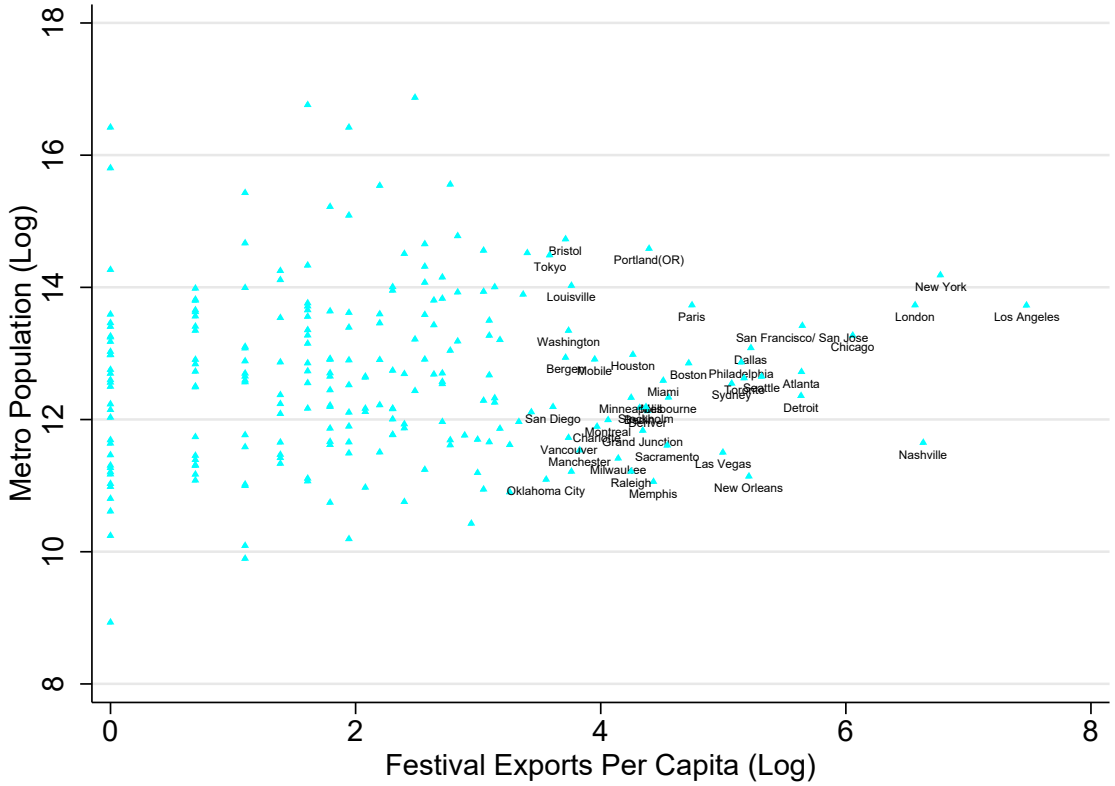
Table 6.15 Leading Exporters to Major US Music Festivals on an Absolute and Per Capita Basis

Metro	Exported Performances 17–19	Per 100k	Acts	Performances Per Act
Los Angeles	1762	192.1	459	3.8
New York	873	60.2	269	3.2
Nashville	759	660.7	199	3.8
London	710	77.1	272	2.6
Chicago	427	73.5	93	4.6
San Francisco/ San Jose	283	42.0	98	2.9
Atlanta	281	83.9	61	4.6
Detroit	280	120.1	65	4.3
Seattle	203	64.9	47	4.3
Dallas	186	38.7	36	5.2
New Orleans	183	265.1	43	4.3
Toronto	176	57.7	45	3.9
Philadelphia	172	44.4	36	4.8
Sydney	159	56.5	29	5.5
Las Vegas	148	149.4	36	4.1
Paris	115	12.5	18	6.4
Boston	112	29.3	36	3.1
Melbourne	95	41.7	28	3.4

Several international metros — London, Toronto, Sydney, Paris, and Melbourne— are top exporters despite the distance and trade barriers separating them and the US festival market. In all cases, foreign festival performers need to obtain temporary work permits to perform in the country. There is a strong degree of globalization in the festival market despite this and other frictions. We see that the net importing metros of Chicago, Atlanta, and Las Vegas are indeed among the top exporters on an absolute basis, suggesting again that we should not over-interpret the left side of Figure 6.5.

Figure 6.6 plots the log exports per capita among regions that export to the sample. There is a small cohort of cities that have perceptibly higher per-capita numbers from the rest of the population. These include the large metros mentioned above, and Sacramento, Raleigh, and Memphis. Nashville is the clear exporter on a per capita basis. All the listed regions export well more than the US average of 2.29 exporters per 100,000 residents.

Figure 6.6 Exports to Sample Per Capita



Next, exports are normalized based on the local number of musicians, as indicated by the random sample of Soundcloud profiles. Table 6.18 shows the share of performances ('slots') in sample, and the share of acts, and the share of musicians from the random sample of musicians, all at the metro levels. It also shows a ratio between performance and musician share, which can be thought of as a place premium. For some reason, some places export more than you would predict based on their number of musicians.

We see that the US superstar cities of Los Angeles, New York, Nashville, and the European superstar of London are leading exporters on an absolute basis. In terms of absolute specialization, these cities account for almost 40% of all music festival performances in the United States. The degree of absolute specialization in Los Angeles — 16.4% — suggests that music festival performers are more comparable to the occupations listed in Figure 5.4. While that analysis shows higher numbers, up to 77% for political scientists in DC, it is based on a US sample. Here, we see evidence of very high concentration of curating production

in a multinational market.

These associations seem to be driven by superstar acts (i.e., acts that perform at a lot of festivals) and not by the overrepresentation of L.A. acts at festivals. L.A.'s share of festival acts is lower than 10%, and Nashville's (3%) is only slightly higher than 2%. In LA you are not more likely than the average musician to play at a big festival, but you are more likely to play at more shows, conditional on being selected.

Of the major music clusters, Los Angeles and Nashville seem to punch well above their weight in terms of festival exports. L.A. acts account for 16% of all performances, compared to only 9% of professional musicians in the random sample — meaning they are twice as represented on festival programs as they are in the putative universe of music. Nashville acts are 7% of the export market and only 2 percent of all musicians, implying a 'place premium' of 3.5.

Table 6.16: Leading Regional Exporters of Music Festival Acts, 2017-2019 (All Genres)

Metro	Slot Share	Act Share	Musician Share (Random Sample)	Place Premium
Los Angeles	16.4%	6.8%	9.0%	1.8
New York	8.1%	4.0%	9.0%	0.9
Nashville	7.0%	3.0%	2.0%	3.5
London	6.6%	4.1%	7.0%	0.9
Chicago	4.0%	1.4%	3.0%	1.3
San Francisco/ San Jose	2.6%	1.5%	3.0%	0.9
Atlanta	2.6%	0.9%	4.0%	0.7
Detroit	2.6%	1.0%	1.0%	2.6
Seattle	1.9%	0.7%	1.0%	1.9
Dallas	1.7%	0.5%	2.0%	0.9
New Orleans	1.7%	0.6%	0.7%	2.6
Toronto	1.6%	0.7%	2.0%	0.8
Philadelphia	1.6%	0.5%	2.0%	0.8
Sydney	1.5%	0.4%	1.0%	1.5
Las Vegas	1.4%	0.5%	1.0%	1.4
Paris	1.1%	0.3%	1.0%	1.1
Boston	1.0%	0.5%	1.0%	1.0
Melbourne	0.9%	0.4%	0.01	0.9

London and New York score the same on the place premium metric at .9. They each command

about 7% of music festival slots. In the New York case that is lower than the local share of musicians. In London it is proportionate with London's share of randomly sampled musicians, and higher than its share of BMI musicians by 3 percentage points. Still, these cities export significantly more slots than you would expect on a per capita basis.

Elsewhere, New Orleans and Detroit all have more than 2.5 more festival performances than their population of musicians would predict, and Seattle's place premium is close to two. Chicago and Las Vegas, net importers from the sample, export more than their proportion of musicians would suggest. Paris and Sydney have small premia.

Table 6.18 differentiates exports per capita by genre, indicating a small degree of specialization by type of festival. This is most obviously the case in Nashville, which has a whopping 18.0 premium in Country music performance; among other top cities, Seattle is the only one to have a plus premium for Country. Nashville is versatile. Its export performance to multi-genre festivals and festivals sponsored by Live Nation and Elite Festivals (Coachella, Lollapalooza, Bonnaroo, Outside Lands, and Ultra) is above 2. Nashville, and not Los Angeles, has the highest premium for Live Nation acts. The only genre that it does not specialize in is Electronic and Dance. Los Angeles is Nashville's mirror, a specialist in everything except Country.

New York realizes a small premium in Elite exports, and London does not realize much of a premium at all. Detroit specializes in every category except for EDM (Electronic and Dance Music), a somewhat counterintuitive finding considering that the genre traces its founding to that city. New Orleans, Las Vegas and Sydney do export EDM acts at relatively high rates. Seattle is the only city to have a premium across each category.

Table 6.18: Leading Regional Exporters of Music Festival Acts, 2017–2019 Based on Place Premium (All Genres)

Exporting Metro	All Exports	Multi-Genre	Elite	Country	Live Nation	EDM
Los Angeles	1.82	1.81	1.37	0.24	1.86	1.81
New York	0.90	1.02	1.20	0.24	0.96	0.88
Nashville	3.52	2.53	2.56	17.99	2.84	0.14
London	0.94	0.69	1.07	0.23	1.01	0.99
Chicago	1.32	1.57	1.45	0.09	1.29	1.59
San Francisco/ San Jose	0.88	1.09	1.33	0.53	1.01	0.83
Atlanta	0.65	0.70	1.04	0.07	0.69	0.67
Detroit	2.60	3.91	3.50	0.00	2.80	0.95
Seattle	1.89	2.92	2.37	1.59	2.04	1.33
Dallas	0.86	1.03	1.09	0.13	0.99	1.00
New Orleans	2.58	1.81	2.30	0.40	2.17	4.49
Toronto	0.82	0.91	1.28	0.00	0.94	0.95
Philadelphia	0.80	1.09	1.18	0.00	0.85	0.86
Sydney	1.48	1.19	1.61	0.26	1.67	3.24
Las Vegas	1.37	1.53	1.70	0.79	1.32	5.15
Paris	1.07	0.72	0.76	0.00	1.16	0.95
Boston	1.04	1.10	0.95	0.00	1.07	1.53
Melbourne	0.88	0.97	0.95	0.00	1.01	0.48

The preceding suggests that even though the music industry has undergone rapid changes in the last decade, it continues to concentrate as it did before (Florida, et al. 2010). We now consider more precisely the effect of curation on the geography of modern music. To do this, we exploit the full study control group, which contains both a sample of acts that were randomly selected from Soundcloud and a sample that are registered on the BMI music publishing database.

Table 6.19 shows the relative share of artists from each metro in the sample. New York and L.A .have among the lowest ratios of BMI to random proportions, indicating that they have relatively more label-affiliated musicians. That non-American cities are more represented on the random list is most likely an indication that the BMI measure is not as relevant for foreign acts. American cities that are much better represented by the random list include Austin, Las Vegas, and Houston. It may be that these cities are primed to have a higher supply of musicians under the present regime of music-making than they were when recording studios represented more significant barriers to entry. Of course, there is a major difference between having a supply of bedroom musicians and having an internationally significant music scene.

Table 6.19 The Share of Artists from the Random and BMI Samples

Metro	Share of Soundcloud Sample (Random)	Share of Soundcloud Sample (BMI)	BMI/ SoundCloud Ratio
Sydney	0.01	0.01	1.70
Paris	0.01	0.01	1.58
London	0.07	0.04	1.56
Berlin	0.01	0.01	1.44
Melbourne	0.01	0.01	1.41
Amsterdam	0.01	0.01	1.35
Montreal	0.01	0.01	1.31
Austin	0.01	0.01	1.27
Las Vegas	0.01	0.01	1.25
Houston	0.02	0.01	1.24
Chicago	0.03	0.03	1.23
Denver	0.01	0.01	1.18
Portland (OR)	0.01	0.01	1.18
Minneapolis	0.01	0.01	1.15
Toronto	0.02	0.02	1.12
Dallas	0.02	0.01	1.08
San Francisco/ San Jose	0.03	0.02	1.06
Orlando	0.01	0.01	1.06
Atlanta	0.04	0.03	1.05
Seattle	0.01	0.01	1.03
Philadelphia	0.02	0.02	1.02
Washington	0.02	0.02	1.01
Boston	0.01	0.01	1.00
Detroit	0.01	0.01	1.00
Phoenix	0.01	0.01	0.98
Nashville	0.02	0.02	0.97
San Diego	0.01	0.01	0.97
Los Angeles	0.09	0.10	0.91
New York	0.09	0.10	0.90
Miami	0.02	0.02	0.67

Music critics are assumed, like curators in general, to be processing-constrained and heuristic-dependent. Whether this leads them to pay more attention to established superstars is a key question in this study. Table 6.20 compares the number of reviews in the All Music Guide and Pitchfork for acts from the superstar cities, a pooled average for the next 5 most reviewed regions, and the average of all other regions in the dataset. Clearly, all superstar cities enjoy a curation advantage. London's curation advantage puts it in league with the other superstars, which was only true to a varying degree in the case of festival exports.

Table 6.20 Comparing Curation for Superstar Metro Acts to Non-Superstar Metros

Metro	All Music Guide Reviews 2016	Per Capita	Average Pitchfork Score	Pitchfork Article Mentions 2017–2019	Pitchfork Headline Mentions 2017–2019
London	613	15.1	7.4	293	494
Los Angeles	458	20.9	7.2	397	703
Nashville	158	64.4	6.8	51	51
New York	741	12.6	7.0	816	871
Fifth–Tenth	23.6	1.0	7.1	199	178
Other Region Average	8.5	9.2	7.0	19	17

Superstar cities are much more likely to be reviewed in the All Music Guide in real and per capita terms. Similarly, a content analysis of Pitchfork reviews shows that article terms associated with superstar metros are more common than those related to other places. The same is true of mentions in article headlines. Is the superstar advantage in festival exports fully consistent with the population of musicians in these places? That is the last question to be addressed.

Three sets of models are estimated for three dependent variables: multi-genre festivals, exports to Live Nation (LN) festivals, and exports to country fests. Together, these point to how much music festival exports are associated with curation.

In models 1, 2, and 3, exports are predicted using local population size. There is a plausible reading of the geography of innovative industries which suggests that urban scale and innovative activity will be super-linearly related (Bettencourt et al. 2010). Separate to this, the presumption of regional scholars might be that music activities are mostly locally serving and will tend to scale linearly with population. According to this view, a large city will tend to export more musicians because they have more musicians to export. The model does not bear this out. Among the 300+ mostly large cities in the sample, there is not a relationship between exports and city size. There is clearly a relationship between city size and qualifying to the sample, however (i.e., having at least 5 acts in the review database). The 100 largest metro areas in the United States are all represented in the sample, as are the 20 largest metros in the world.

Models 4, 5, and 6 introduce additional controls in the form of local musician population, based on the BMI metric, and place dummy variables. The BMI statistic controls for the obvious non-curatorial

mechanism, which is that the places with the most musicians will also have the most festival musicians. This significantly predicts multi-genre and LN exports, but not country exports. This may suggest that another directory would be more suitable for sampling the population of country musicians. The amount of variation explained by the Country model is, while still high, relatively low. The country music system is arguably a separate organizational field from pop music, and so it is worthy of its own investigation.

The dummy variables absorb place-specific characteristics for the superstar cities as well as Detroit and Seattle, two additional cities that export at a high rate. Although these cities are not quite as celebrated as modern centers of the music industry, they do each have traditions of high performance in Motown and Grunge. The strategy is to observe how the introduction of curation variables affects place-based relationships. To what extent is 'L.A.ness' in exporting explained by curation?

Measuring the effect of upstream curation on festival curation at the metro level is complicated by a high degree of correlation among Non-Label curation variables. Variance-Inflation-Factor tests were used to identify a non-collinear set of curation measures. The final list of predictors includes the number of times a metro region is mentioned in Pitchfork reviews, as opposed to the direct measure of Pitchfork Reviews for artists from a region, and the number of major music festivals in an area. These metrics are presumed to measure a region's curatorial standing and/or visibility. The major festivals term is chosen to reflect the possible spotlight effect that having a local festival might offer to acts (see Adler, 2014). We see their associations in models 7, 8 and 9.

Table 6.21 Predicting Regional Music Festival Exports: 2017-2019

D.V.: Exported Music Festival Performances	(1) Multi-Genre Exports '17–19	(2) LN Fests	(3) Country Fests	(4) Multi-Genre Exports '17–19	(5) LN Fests	(6) Country Fests	(7) Multi-Genre Exports '17–19	(8) LN Fests	(9) Country Fests
Metro Population	5.343	8.284	−0.352	−0.026	1.485	−0.210			
	(4.311)	(5.468)	(0.395)	(1.883)	(1.751)	(0.184)			
Local BMI Musicians (log)				14.495***	17.358***	0.058	4.038***	5.841***	−0.146
				(1.618)	(1.503)	(0.158)	(1.437)	(1.218)	(0.160)
Los Angeles Effects				1083.648***	1462.096***	7.233*	851.446***	1209.570***	7.727*
				(38.351)	(35.490)	(3.722)	(37.234)	(31.483)	(4.147)
New York Effects				545.585***	705.327***	7.328*	23.851	136.494***	9.536
				(38.413)	(35.547)	(3.728)	(58.060)	(49.095)	(6.467)
London Effects				489.237***	574.165***	5.283	319.828***	390.337***	5.151
				(38.084)	(35.242)	(3.696)	(33.632)	(28.437)	(3.746)
Nashville Effects				282.970***	456.777***	134.881***	274.523***	445.993***	134.018***
				(37.900)	(35.075)	(3.678)	(29.544)	(24.981)	(3.291)
Detroit Effects				169.516***	195.937***	−0.937	87.861***	106.032***	−1.649
				(37.736)	(34.921)	(3.662)	(30.292)	(25.613)	(3.374)
Seattle Effects				106.376***	124.522***	5.129	49.669*	62.372**	4.183
				(37.723)	(34.908)	(3.661)	(29.828)	(25.220)	(3.322)
Pitchfork Mentions							0.691***	0.757***	−0.004
							(0.066)	(0.056)	(0.007)
All Music Reviews (2016)							12.518***	13.729***	0.367
							(4.527)	(3.827)	(0.504)
Major Festival in Metro							7.438*	8.732**	2.323***
							(4.219)	(3.568)	(0.470)
Constant	−44.768	−73.973	5.679	−54.276**	−81.908***	3.100	−16.485***	−21.435***	0.698
	(54.540)	(69.132)	(4.996)	(25.089)	(23.255)	(2.439)	(5.988)	(5.083)	(0.670)
Obs.	303	303	303	283	283	283	283	283	283
R−squared	0.005	0.008	0.003	0.855	0.923	0.836	0.898	0.955	0.848

Standard errors are in parentheses
*** p<0.01, ** p<0.05, * p<0.1

A region's degree of critical curation — All Music Guide Reviews in 2016 and Pitchfork mentions — does appear to be robustly and significantly related to its LN and multi-genre exports, but not to its country music exports. The local festival variable is only significant at the .1 and .05 levels for multi-genre and Live Nation festivals but is highly significant in the case of country exports. This term is the only significant non-place variable in that model.

More importantly, we see that adding the curation measures does reduce the effect size of the dummy variables, indicating that curation is associated with festival exports. The reduction is weakest for Nashville (8 acts) and strongest by far for New York. Between models 4 and 7 and 5 and 8, New York's place advantage in exports drops from 545 and 705 to 23 and 136 respectively, and there is no longer a

significant relationship in the Multi-Genre case. Seattle and Detroit's effects drop by around 50% between the two sets of models, and those of London and Los Angeles drop by a quarter or so. We can conclude from these estimates that curation, on top of being related to population size (being large enough to be in the sample) and the local supply of musicians, is related to export performance.

We return to the issue of controlling for quality. The most serious confounding variable in this study remains intrinsic act quality. In this case, we might be concerned that differences in the quality of acts in superstar cities explain curation upstream and at festivals.

To get at this, we turn to a measure of festival survivorship from year to year. This measure accounts for how many acts from an area at South by Southwest — a festival with low barriers to entry — survive to play at a major festival several years later. This exercise exploits both Operation Every Band data on SXSW artists in 2013 and 2016 and the festival dataset.

Table 6.22 shows survival rates. Given the more expensive cost of living in superstar cities, we might expect survivorship to be lower there. The merely average enterprise cannot be expected to 'hold on' in the face of high rents. However, superstar survivor rates are among the highest overall, suggesting that the average productivity differential between superstar SXSW musicians and others may offset higher factor prices.

Only Sydney acts have higher survivor rates than acts from London, Nashville, Los Angeles, and New York. Given Sydney's position within its national city system, and its own history of musical exports, this might be evidence that it itself should be compared to the other superstar cities.

Cheaper US scenes like San Antonio and Houston have significantly lower rates. This could point to higher 'quality' independent of curation as much as it points to stronger curation. In either case, it demonstrates that musicians in superstar cities can overcome competitive pressures (high local supply, high factor costs) to survive at higher rates.

Table 6.22 Survival Rate from 2013 and 2016 SXSW to 2017-2019 Festivals

Metro	Survival Rate	Perished	Survived from SXSW to Fest	Total
Sydney	33.3%	18	9	27
London	30.7%	124	55	179
Nashville	29.8%	92	39	131
Los Angeles	26.9%	343	126	469
New York	25.2%	366	123	489
Philadelphia	25.0%	54	18	72
Vancouver	25.0%	36	12	48
Toronto	23.8%	61	19	80
Montreal	23.6%	42	13	55
Seattle	23.6%	42	13	55
Washington	22.6%	24	7	31
Santiago	21.7%	18	5	23
Oklahoma City	20.8%	19	5	24
San Francisco	20.5%	89	23	112
Detroit	20.0%	28	7	35
Glasgow	20.0%	16	4	20
Austin	19.5%	455	110	565
Atlanta	19.4%	87	21	108
Miami	18.8%	26	6	32
New Orleans	17.9%	46	10	56
Minneapolis	17.1%	29	6	35
San Antonio	17.1%	29	6	35
Portland (OR)	16.7%	30	6	36
Chicago	16.5%	111	22	133
Houston	14.4%	101	17	118
Boston	14.3%	30	5	35
Melbourne	14.3%	18	3	21
Dallas	12.1%	94	13	107
Berlin	11.5%	23	3	26
San Diego	10.0%	18	2	20
Mexico City	9.7%	28	3	31
Seoul	6.7%	28	2	30
Tokyo	3.4%	28	1	29

In addition to being intrinsically significant, survivorship may be a useful proxy for act quality that is uncorrelated with curation, based on the following logic. If we imagine two identical, unknown acts, one that idiosyncratically gets curated and another that does not, then we might expect (based on the propositions

Table 6.23 Predicting Exports with Metro Quality Instruments

	(1)	(2)	(3)	(4)	(5)	(6)
	Multi-Genre Exports	Multi—Genre Exports	LN Exports	LN Exports	Country Exports	Country Exports
Pitchfork Mentions	0.691***	0.311	0.757***	0.442**	—0.004	—0.004
	(0.066)	(0.330)	(0.056)	(0.181)	(0.007)	(0.006)
Local BMI Musicians (log)	4.038***	46.263	5.841***	56.439**	—0.146	0.244
	(1.437)	(37.278)	(1.218)	(20.452)	(0.160)	(0.682)
All Music Reviews	12.518***	—59.762	13.729***	—29.455	0.367	0.822
	(4.527)	(95.737)	(3.827)	(52.525)	(0.504)	(1.752)
Major Festival in Metro	7.438*	57.284	8.732**	2.039	2.323***	—0.150
	(4.219)	(54.037)	(3.568)	(29.647)	(0.470)	(0.989)
Los Angeles Effects	851.446***	810.532***	1209.570***	1164.503***	7.727*	7.449***
	(37.234)	(137.223)	(31.483)	(75.286)	(4.147)	(2.511)
New York Effects	23.851	147.527	136.494***	226.105*	9.536	9.211**
	(58.060)	(221.086)	(49.095)	(121.296)	(6.467)	(4.046)
London Effects	319.828***	263.452*	390.337***	349.441***	5.151	5.117**
	(33.632)	(127.168)	(28.437)	(69.769)	(3.746)	(2.327)
Nashville Effects	274.523***	154.812	445.993***	361.331***	134.018***	134.306***
	(29.544)	(124.749)	(24.981)	(68.442)	(3.291)	(2.283)
Detroit Effects	87.861***	62.396	106.032***	99.846*	—1.649	—0.847
	(30.292)	(104.296)	(25.613)	(57.221)	(3.374)	(1.909)
Seattle Effects	49.669*	0.671	62.372**	40.837	4.183	4.903**
	(29.828)	(106.058)	(25.220)	(58.188)	(3.322)	(1.941)
Survival Instrument		332.256		185.766		3.143
		(384.108)		(210.736)		(7.030)
_cons	—16.485***	—296.579	—21.435***	—336.741**	0.698	—1.682
	(5.988)	(227.685)	(5.083)	(124.917)	(0.670)	(4.167)
Obs.	331	31	331	31	331	31
R—squared	0.898	0.900	0.955	0.982	0.848	0.996

Standard errors are in parenthesis
*** p<0.01, ** p<0.05, * p<0.1

described above) for the curated act to 'ride' exposure to some degree of early success. However, these acts should also converge over time, as returns to recognition conditional on being recognized already should diminish over time while returns to quality should at least be constant. Regional survivorship rate might, then, be understood to proxy for regional quality differences among recognized acts. Unfortunately, the sample size of Operation Every Band is small at the regional level, however it still yields some insights based on a 31 metro sample.

Table 6.23 shows estimates for all three main dependent variables as well as the curation model

from above. We see that place effects reappear in the LA case, and even appear stronger in the case of country exports. The effect for Multi-Genre festivals weakens for New York and becomes insignificant for Nashville, Detroit and Seattle. The effect for Live Nation exports weakens for New York and Detroit and disappears for Chicago. Together these results point to the conclusion that superstar cities, due to place-specific factors, are prolific exporters of music festival acts.

The introduction of survivorship substantially affects curation effects. Controlling for survivorship, a region's standing in the All Music Guide is no longer influential on exporting. Pitchfork effects are no longer detectable for Multi—Genre festivals and are weaker for Live Nation exports. The effect of having a local music festival also disappears. Thus, among this small list of cities, curation is less significant when controlling for survivorship. Unfortunately, sample size prevents these results from being anything more than complementary to the main analysis. On that basis, we should allow that the present study does not fully control for quality and concede that future studies may overturn Hypothesis 3. Given that the number of musicians in a region is itself a believable quality measure, which is controlled for in the main study, it is reasonable to say that curation does predict exports even when quality is controlled for.

VI Conclusion

One central hypothesis of this dissertation is that products, once curated, will tend to be curated again, and that a degree of value in symbolically-differentiated fields can be traced to this prior curation. In this chapter, we have subjected that theory to empirical scrutiny by studying the degree to which selection to music festivals in 2017, 2018 and 2019 is associated with prior curation. We find broad support for many of the initial premises, as well as indications that further study would be useful.

Ideally, we would be able to test these propositions under experimental conditions by cloning musicians and subjecting one half of the sample to curation and another to no curation. The degree to which the two groups differed in terms of curation at T +1 would represent the effect of earlier curation. Without access to such results, this study has tried to differentiate music festival acts from 2017-19 on the basis of prior curation and their geography, controlling for their popularity.

Prior Curation is Valuable

There is a strong tendency for music festivals to recycle music festival acts. The median act to perform at any major American music festival between 2017 and 2019 did so three times, even though the supply of available acts could theoretically accommodate unique festival lineups. The average among acts who performed was double the median, suggesting a more skewed distribution. Over half of programmed performances were commanded by performers with 10 or more festival slots. Superstardom at the act level is magnified at the level of regions. There appears to be a high degree of absolute concentration among regional music scenes with just four regions (LA, New York, Nashville, London), accounting for 37% of all exports in the sample.

Music festivals recycle acts exactly as we would imagine they would if curation itself was a source of value. These results are not as consistent with an idealized model of the programmer as an independent judge of talent who processes thousands of acts and chooses the best among them.

It strains credulity to think that curators just happen to share festival lineups with each other to this extent because they come to common judgements. In the Salganik et al (2006) study, independent evaluators were mostly unable to agree on quality, whereas impressionable raters tended to converge on common judgements. The results of this study are consistent with those findings, though they are drawn from real music markets.

Most of the evidence comes from multivariate regression estimates which try to compare various forms of curation to popularity and other measures. These suggest that festival programming is more related to prior curation than it is to act popularity. At both the act and festival levels, programmed acts in 2017-2019 tend to be acts that were selected by prior programmers and reviewers more than they are acts that were already popular.

Regarding the relationship between festival selection and popularity, it is shown that festival performances anticipate later popularity, and thus that these results speak to pop music in general and not just the world of music festivals. At one point, the music festival was a small part of the wider industry, but as was argued in the first part of this chapter, it is now close to the center — both symbolically and in terms

of revenue — of a more curatorial industry.

Act Origin Matters

Here, there is clear evidence that an act's geography will influence its probability of curation, including festival curation. It was hypothesized that curators would tend to 'shop local' for acts to consider and revealed that this is in fact the case. Festival curators are more likely to select acts that their firms have already selected, that have already performed at a festival, or that hail from the headquarters metro of the promoting firm. These associations suggest that proximity to curators is in and of itself a determinant of value in the pop music industry. A curator cannot select you if they do not know about you, and local proximity improves the likelihood that you will join their consideration set.

Act origin appears to matter at a metro level as well. Music criticism, which is in and of itself associated with festival selection, is inflected toward acts from Los Angeles, London, New York, and Nashville, even controlling for the musician population of these music clusters. Regional regressions corroborate these trends. Regions with more curatorial exposure (as captured by Pitchfork mentions and the local supply of music festivals) are more likely to export to festivals on a per-musician basis. Even after the possible quality differences between superstars and other cities are considered, there do seem to be provenance premia in the music festival market.

The Function of Music Clusters

Chapter 5 proposed that music clusters perform a condensing role in the spatial division of labor, and this chapter uses evidence from a living, breathing industry to tell a similar story. The modern music industry is replete with selection — too much selection from the standpoint of the average consumer. The simple task of knowing what music should be considered is made more difficult by the digital and streaming revolutions, and this compounds with the age-old problem of figuring out how to tell which music is good. Curators, working mostly from music clusters, organize the music market into something that can be easily known and valued. They convert an unknowable number of music acts into a listable number of signed or

programmed acts, and then through successive rounds of curation they elevate some acts to the status of recognizable superstars. As a result of their work, even the most casual music consumer has some way of interfacing with the music market — everyone knows who Beyoncé is.

But curation is not genius, and curators do not possess unusual powers to determine which acts are good. The magic of curation lies in its industrial organization. Curators incorporate each other's signals as inputs into their own. They huddle together in clusters because agglomeration helps them on the margin to lower transactions costs to acquiring curation, to form cascades, to independently decide value, and to reap place branding benefits. Ultimately, the cluster is the 'spatial fix' that allows the music industry to make sense out of its massive selection of musical talent.

While this study has not been able to isolate specific agglomeration mechanisms, the strong regional inequalities in the music festival export market suggest that there are substantial clustering effects in music that exceed what are found in IT and manufacturing. This chapter presents analytical evidence that, as hypothesized, music clusters such as Los Angeles and Nashville, and to a lesser extent New York, London, Detroit, and Seattle, enjoy advantages in curation upstream of the festival that can be associated with their performance as exporters.

This research leaves room for additional econometric studies. Future research would attempt to proactively measure provenance, perhaps with survey data from programmers. Along these lines, other studies could usefully try to measure act quality in a more scientific matter (e.g., melodiousness, management quality) and use these measures as controls. The believability of the study largely hinges on the degree to which it has controlled for the intrinsic qualities of an act that might be correlated with selection under conditions of no curation whatsoever. New research might also try to operationalize programmer context in a more specific way by determining which acts were indeed on the programmer's 'radar' before festivals were programmed. Each of these approaches would require more resources than are currently available and would certainly also require smaller study samples. For now, it is enough to say that the descriptive and preliminary evidence supports the view that curation matters in music festival programming.

Chapter 7: Conclusion

Products and their creators usually take center stage in discussions of urbanized creativity. Talented workers and firms are said to congregate in cities to make them more innovative and productive. The strong implication is that the Bay Area tech firm's 'killer app' would be less lethal were it developed elsewhere, same with the Hollywood studio's blockbuster or a London trading firm's new derivative. Agglomeration is said to make products better.

This study emphasizes that hit creative products (called symbolically-intensive products here) and 'talented' workers are not immediately recognizable as such. Before a product can be a hit and before it can propel regional prosperity it must be demanded. And because killer apps are new by their nature, the demand for them must be generated. Consumers who had previously not known about them must become confident that they are valuable. The process of preparing markets to demand new products is a hitherto less-discussed aspect of localized creative production. Firms and workers also gather in cities to assess or decide what ideas, workers, or products are valuable. Well before the hit product is unleashed, it and its components are processed through curation systems that vet and valorize it, and these processes are highly localized. This section reviews the curation argument as it has been laid out in the present study and proposes a research agenda.

Summary

The argument that the creative city is inevitably a curating city is part economic and part geographic. If a product's value hinges on its symbolic characteristics, then there will be fundamental uncertainty related to how valuable it is to its consumer or producer; this is in turn rooted in the polysemic squishiness of symbolic value. The core question of whether symbolic characteristics and symbolically-differentiated goods are economically valuable cannot be resolved before a product has been produced. This "nobody knows" (Caves, 2001) property has long been associated with cultural goods and is relevant to venture capital, finance, high technology and indeed most of the wider 'Creative Economy'.

Symbolic valuation problems are compounded whenever technology lowers barriers to symbolic production and the market is suddenly flooded with new products. This was true of Renaissance-era European publishing and might be truer today. Digital technologies have led to a supply shock in many markets while in others a more global marketplace has meant mor symbolic selection.

The impact of more choice on consumers and intermediate producers of symbolic products is ambiguous. These actors cannot instantaneously convert additional variety into utility because more choice often entails higher transaction costs to understanding and evaluating the market, including subjective feelings of being overwhelmed or even oppressed by choice.

For consumers to participate in symbolic markets, especially modern 'long tail' type ones, they need to maintain confidence that a chosen product will reliably meet their needs even as the scope for doubt expands. Similarly, producers need to be confident of their return on investment before they commit to producing this or that or any symbolic product. Enter curators. They work on behalf of producers and consumers to help them make decisions under these conditions of uncertainty, ascertaining what is worth valuing or even deciding what will be valued.

Around symbolic products with a large enough market we tend to find sequential systems of curation that process larger sets of unknown or unknowable products into discrete and well-understood choice sets. Curators intervene between the marketplace and potentially overwhelmed buyers to provide signals about product value and common assessments of which products are worth considering (i.e., of the extent of the recognizable market). The symbolic producer and the symbolic consumer lower their uncertainty about products by either consuming curation signals (e.g., reviews, lists) themselves or by directly consuming curators' decisions. Curation decisions are often tacitly consumed, as is the case when a product is purchased from a retailer or when that same retailer purchases from a wholesaler.

Curation value is rooted in industrial organization more than genius. As appealing as stories about uncanny star-spotting ability might be, even the most inspired products are not instantly recognizable as such. The professional curator is not substantially better equipped than the civilian to distinguish between the naturally good and less good. They can nonetheless *appear* to have these powers by being properly

situated within the curation system. A prime position will give them access to valuable curation signals from earlier curators in time to be used as inputs in their own signals. So, the untalented music label executive will be better able to lower uncertainty in the consumption of music than will a hyper-perceptive but amateur "super listener". By the time that the latter can train their superior ears on an album, its symbolic value will have been mostly decided; a perceptive late review matters much less than a mediocre early review.

Curators would seem to benefit by agglomerating near each other and symbolic producers. Physical proximity makes search cheaper and richer, allows curators to maximize the public goods benefits of 'information cascades', to form common consideration sets, to decide value by fiat and to reap the rewards of place brands. Mostly, the same features that would draw curators into an agglomeration would also draw producers. Curators agglomerate because it is easier to search, producers agglomerate to be found.

As is the case in non-symbolic production, the benefits of agglomeration are not always substantial enough to cause it. There are trade costs, congestion costs, cultural barriers and more that prevent the agglomeration of production and curation in a single city. Still, there should be an underlying tendency toward centralization when these constraints are relaxed and agents can be footloose. Accordingly, there is a high concentration of 73% of American political scientists in Washington DC because think tanks and lobbying organizations benefit by being near the 'producers' of politics and a somewhat even distribution of university professors (including professors of Political Science). The latter group might otherwise agglomerate in one or a few centers if they were not providing a local service to a population that prefers to live near their hometown (Niche, 2014), and indeed does agglomerate temporarily, at seminars and conferences.

Chapter 3 provides preliminary validation of the idea that curators agglomerate to be more productive. It demonstrates that symbolic and curating sections of the economy are significant, and more importantly that footloose curating occupations are much more likely to agglomerate in a single place. Due to the crude nature of administrative statistical categories used here, these estimates should be considered

suggestive. Dispositive evidence of a curation/agglomeration relationship would require data on occupational content that disaggregates worker value added into curatorial and non-curatorial components, and fine-grained occupational categories that would not for instance and as the current categories do, group a newspaper's film critic in the same group as its foreign affairs correspondent.

Chapter 4 studies individual curators and producers in the highly curatorial organized field of music festival performances. It suggests that upstream curation shapes downstream curation, that curators might be biased to products from their local contexts, and that the geography of music festival performers is related to the geography of music curation. To conclude that curation matters, this study compared curated acts to a hypothetical control group that was less favored by curators. Its biggest limitation is that, while it seeks to statistically model how curators make decisions, it does not gather direct evidence about the behavior of curators. A follow-up ethnographic study might investigate the process of music festival programming itself: how curators acquire information, how they assess acts from different scenes, whether they are aware of any biases in their decision-making and whether they correct for these. Qualitative study could also clarify whether organizational imperatives (i.e., Live Nation festivals should promote Live Nation Acts) and not search and evaluation processes themselves, account for observed trends. I hope to pursue studies along these lines.

Research Agenda

This study raises several important questions for urban planning scholars and practitioners that only become clear when the curating role of creative cities is considered. While it has not featured policy analysis specifically, it does raise basic questions about how urban planning scholars and even policymakers themselves approach localized innovation and creativity.

Does creative production make a creative city?

The most obvious implication of this study for urban planning theory and practice is that creative cities rely on transactional functions that cannot be described as the production of final creative products. The view of

the creative city as a place that mainly or only assembles symbolic inputs understates the true power of places like Hollywood.

The geography of Netflix illustrates this point. Netflix is currently producing shows and movies in New Mexico, Georgia, and Surrey in addition to California. They have been successfully drawn there by tax incentives for film production. However, the firm's curation functions — the identification, selection, and promotion of its products are still firmly rooted in LA. Local economic development policies have not pried these away. Therefore, there is a clear hierarchy among Netflix's production centers whereby Albuquerque, Atlanta, and Milton Keynes make the shows that Los Angeles says are valuable.

Recent evidence suggests that the importance of locating in the Hollywood curation center is not waning, even for a major firm like Netflix and even during the current 'work from home' age. CEO Reed Hastings surely had his company's L.A. offices in mind when he said about the firm's pandemic teleworking routine:

> "No. I don't see any positives. Not being able to get together in person, particularly internationally, is a pure negative. I've been super impressed at people's sacrifices." (Flint, 2020)

This study also suggests a new way to think about Netflix's nominal home base of Silicon Valley. Silicon Valley is not just a home base for information technology and engineering creation, but also where symbolically-differentiated ventures must be assessed, sorted, and ultimately funded based on their potential. It is where potential is in turn divined through symbols like reputations, PowerPoint 'decks', and pedigree.

Understood in this way, the funding of a venture and the greenlighting of a film project are similar. In each case, the funder must make consequential decisions about how valuable something will be based on how it is represented in the present. In each case, the producer can achieve more certainty about which product is valuable by relying on the judgements of others or outright outsourcing symbolic decisions to professionals. And in each case, the five microfoundations to curation agglomeration should operate: lower curation and input costs, cascading industrial organization, consideration set herding, 'Ouija effects' and provenance effects.

Policymakers outside of apex-level economic clusters like Silicon Valley and Hollywood are wont to try to build their own creative clusters from scratch, as is evident from attempts to create 'Silicon X" or 'Tech City Y' (Nathan et al. 2019). Such initiatives would be longshots even if they started from the soundest reasoning about how Creative Cities operate. This study emphasizes that the attractiveness of Silicon Valley or Hollywood to creative actors is partly rooted in their ability to decide what is valuable. The curation function in turn requires dense networks of curators and producers that represent a multitude of individual location decisions. A city that wants to mimic these functions faces an uphill battle indeed.

The view that creative clusters largely exist to curate is of special relevance to scholarship on the music sector. There is currently an energetic 'music cities' movement brewing in some cities which seeks to animate investment in music activities. Witness the annual *Music Cities C*onvention, which in 2019 brought together some 260 cities and 2,000 attendees to discuss 'placemaking with music' (Music Cities, 2020), and many smaller city-level initiatives (see Ballico and Watson (2020) for a helpful academic review).

This effort is somewhat chaotic in the sense that it invokes both economic and humanistic rationales for broader community engagement with music. The present study has nothing to say about whether investments in music are good for quality of life, but it does demonstrate that it would be extremely hard to generate a music exporting cluster out of whole cloth. The music cluster does not appear to just be a wellspring of music talent, promoters, or labels, it is also a place on the map where curatorial and critical spotlights shine. To become a music cluster requires the ability to command the attention of a curating system that, by design, uses focused search routines to find musical talent.

Many communities rightly intuit that they can generate some curatorial power by starting their own music festival and Chapter 6 does show that local festivals help local artists. However, a single festival has the disadvantage of being relatively late in the curatorial sequence (i.e. after curation by agents, labels, and music schools), and of being itself only capable of sending a small signal. There are some 300 major festivals each year. The center of gravity in music — the place where 'the action is' — is still superstar cities. This is where programmers, critics, reviewers, and labels are, and this is where curatorial attention is

focused. Music city strategies that cannot explain how they will divert attention and enthusiasm from the center, and on a lasting basis, will not generate new musical centers.

An urban policy research program around curation might investigate how footloose curation functions are or could be. Would aspiring music cities be more successful if, instead of prying successful musicians from elsewhere they courted music curators (reviewers, festival programmers and so forth)? Would such a strategy, if successful, pay more dividends than current ones? A related question applies to whether curators can be developed in areas without incumbent critical mass. Can you develop an influential music reviewer locally if they are not already embedded in thick networks of other curators and producers? The present Zoom routine period might give outlying areas hope than you can. Then again, if current economic activities are mostly re-enacting routines that were established locally, then they very much remain attached to the incumbent 'superstar' music city system.

What is curation's social value?

The curating city approach leaves to the side any evaluation of what symbolic goods are platonically better or worse. There may be objectively better and worse symbolic products, but that question does not matter much here. The focus has been on how products come to be recognized and valorized. The strong implication of Chapters 5 and 6 is that if Beyoncé Knowles-Carter (who is considered the best singer alive) had recorded all her early music in a small town, she would likely have never been recognized. It is because she has made her music near curators—first in Houston and then Los Angeles-- that she is rightly considered to be one of the great modern singers.

Let us imagine that Kelly Rowland (Beyoncé's co-star in Destiny's Child) and not Beyoncé had somehow been elevated to the latter's current superstar position. Would the world be worse off? The curation city view is that it would not. Talent differences between the two are minimal; they also come from the same place and they have similar personal histories. If there is some superstar for the market to converge on (Salganik et al., 2006; Adler, 1985), if the curation system agreed that Rowland was a superstar to the same degree that they agree about Beyoncé, then no one except Knowles-Carter herself would be much worse off.

On the other hand, if the curation system that elevates Beyoncé is somehow impeded, if it is less able to communicate and less agglomerated, then we should expect to see welfare losses in the form of lower superstardom and/or lower confidence in the superstar product. In this case, perhaps more easily overwhelmed/indecisive consumers are more likely to consume something else if they do not have access to a clear superstar. The problem in a curation-free world is not that it is unable to discover Beyoncé, but that the market is less confident in the average star. Curation does not at this stage appear to be rent-seeking. Curators provide a real service to markets by lowering fundamental uncertainty for consumers and intermediate producers of symbolic products.

This lesson has direct implications for cultural policy. National and state-level officials will sometimes locate cultural facilities purely on redistributive grounds as if they are not subject to agglomeration economies. For instance, the UK moved many of the BBC's functions to Salford in Northwest England (Christophers, 2008) on economic development grounds. This study suggests that such decisions involve an equity / efficiency tradeoff between performing broadcasting's highly curatorial functions and promoting regional development. If such schemes are unlikely to generate catalytic creative activity anyway, they might be counterproductive. Similarly, attempts to subsidize local cultural content (e.g., Canada's 'CanCon' film and music policies) may enrich local producers at the expense of consumers if these end up making the marketplace more expensive to search.

These thoughts are preliminary. An entire research agenda might drill down into the value of curation more than has been possible here to better understand the magnitude of the relevant agglomeration economies. The holy grail of such research would be a credible approach to disaggregating the value of creative products into a portion related to their innate characteristics and another related to their curatorial standing. This study has used popularity as a proxy for innate characteristics, but such an approach has its limitations. With better estimates in hand, it would be possible to think through the costs and benefits of public policies which try to decentralize curation.

How urban must curation clusters be?

The theory presented in Chapter 5 is that curators and symbolic producers are pushed toward some center by at least five forces. This account does not attempt to characterize that center beyond proposing that it is a common labor market roughly equivalent to a metropolitan region. It is not clear at this point, that centers of curation must have certain density or urban form. Dating back at least to Jacobs (1969), and through influential studies by Duranton and Puga (2001) and Bettencourt et al. (2007), it has been commonly understood that larger cities are more diverse and as a result more likely to innovate. It could very well be that this also applies to curation (i.e., recognizing innovation), but the current study has not investigated this, and it would be inappropriate to speculate without thinking through the appropriate urbanization mechanisms in the manner Chapter 5 does for localization economies.

What does seem clear is that the scale at which curation is organized is small relative to the size of a major urban center. Less than 10% of L.A.'s workers are engaged directly in entertainment work, to say nothing of professional music. This leads to clear tradeoffs for urban officials who must balance acting on behalf of a small and economically dynamic sector with abiding by the will of the larger electorate.

It also potentially leads to governance instability at the sub-urban level. Public officials in cities like Los Angeles and Seattle are often more preoccupied with the prospect of creative firms moving out of the region than with attempts by those same firms to have more power devolved to them. However, given current home rule powers in US cities, it is reasonable to imagine local organizational fields privatizing government functions or even seceding altogether. While secession may seem farfetched, the privatization of public services in The Bay Area (e.g., the Google Bus or Business Improvement Districts) is already commonplace.

The question of whether local curation networks can exist in smaller and less connected regions is top of mind to the European Union. Its extensive appellation program reinforces the provenance power of certain regions over certain goods, giving them a monopoly on the official versions of products. Most of the recipients (e.g., the Champagne region) are areas that are otherwise not on the cultural or economic development leading edge, and proponents of appellations believe that the policy supports inter-regional

equality (Libery and Kneafsey, 1998). Then again, this study has unearthed evidence of a provenance premium that is independent of protectionist policy. Any city in the US gets to produce "Country Music", Nashville Country Musicians seem to, all the same, be better valued by the market- even controlling for their popularity. The preceding view puts into relief, the question of how decisive appellations really are.

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We can conclude by returning to the twin cases of Richard Lovett and Fleetwood Mac. By now we have much more reason to believe that they made it everywhere because they made it here. As talented as they are, these Hollywood hopefuls, had the good sense to move to a place with "starmaking machinery" (Stokes, 1977). Sometimes where you are known is more important than what you know, and a key part of who you know.

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