The Iron Cage:

Ugly, Uncool, and Unfashionable

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Abstract

This article claims that two forces have created a major step-change in fashion markets; a step change that mandates a revised theory of fashion. One force involves the revival of historical studies concerning how organizational markets supplied artefacts that became fashionable because they met not only consumers' cultural tastes, but also their technological preferences. We call such artefacts cultural-technological fusions. A second force involves recent changes in fashion as a phenomenon. A changed phenomenon which results from the digital mode of production's tendency to generate more fashionable cultural-technological fusions, which replace each other at a growing rate and travel increasingly swiftly across consumers globally. The article advances a theory about how organizations modify cultural-technological fusions and about the structure and function of digital markets for such fusions. The article raises questions, derived from the theory, concerning both fashions and fashion trends in cultural-technological fusions.

Two key features characterize fashionable artifacts. Their tendency to change relatively rapidly over time and to travel comparatively swiftly across space (Benedict, 1931). By contrast, Hughes (1936) noted that "institutionalized" artifacts had "…a relative permanence of a distinctively social sort." They tend to remain stable and confined to specific locations.

Many business techniques, for instance, fit this characterization of "fashions." As noted by Abrahamson (1991), such techniques tend to change relatively rapidly over time and, as Czarniawska and Sevón (2005) observed, to travel swiftly around the globe. Likewise, from the cultural perspective, it is clear the sartorial design of military uniforms tends to remain stable and to differ by country, whereas civilian sartorial design changes relatively rapidly and travels globally.

It would be nice to study to the interrelation between the organizational perspective on the production of fashion fitting these characterizations and the cultural perspective on the distinguishing characterizations of fashions so produced. But why interfere with this organizational-cultural division of labor? And, more importantly, why do so now? Each of this article's first two sections provides a separate answer to each of these two questions.

The first section answers that the institutional theory of organizations still tends to study artefacts that remain static over time and differentiated across space (DiMaggio, 1988). By contrast organizational and cultural perspectives on fashion reveal that the dynamic, global nature of fashion theory renders it perfectly suited to conceptualizing a growing number of recent historical studies of change; changes in organizations' production of artifacts that become fashionable because of both the evolution of consumers' collective cultural tastes and of their technological preferences. We call such artifacts "culture-technology fusions" or "fusions," for short.

The second section adds to the first a more important answer: that the digital production of fusions by organizations has caused more than a gradual change in fashion as a phenomenon. It has created a major step-change in the rate of substitution between fashionable fusions and in the scope and speed with which they travel globally; a step change requiring a revised theory of fashion.

This article's third section advances a reformulation of a theory of markets for fashionable fusions and the fashionable fusion they produce. The fourth section examines how to expand the scope of fashion studies to include such a theory. The concluding section considers pairings of analytical constructs employed in the theory—cultural tastes and technological preferences, for instance. It then examines whether such pairings remain useful, analytically, or whether they should be transcended.

Historical Studies of Cultural Fashions and Technological Change

This section examines in turn three types of historical studies. The first type focuses on historical studies that overlook the impact of organizations' production of technological change on cultural fashions. The seconds turns to historical studies of the production of technological change that ignores the impact of cultural fashions. The third type examines studies that recognize culture-technology fusions.

Historical research on cultural fashion, absent technological change. Consider one example. From its inception, research on fashion has focused on fashion in women's adornment (Czarniawska-Joerges & Sevón, 1996). Even now the study of cultural factors dominates historical studies of changes in such fashions, de-focalizing the historical study of technology's influence on such fashion changes[1]. Dumez (2010), however, provides a powerful review of nascent historical research about technological influences on fashions in women's attire. He highlights, for instance, that one

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[1] The nascent sociology of technology examines social forces affect technological, although cultural forces receive little systematic analysis (c.f. Bijker, 1995).

percent of all patents filed between 1850 and 1950 were connected with the women's fashion industry. Patents ranged from the elaborate infrastructure supporting hoops skirts, to smudge-proof technologies to administer lipstick and to protect it in retractable tubes, to the chemistry of mascara, and to many other long-forgotten technologies designed for women's fashions. More blatantly, the cultural perspective on fashion tends to gloss over the organization's major effort, over half a century, to produce a brassiere enabling women to satiate their growing taste for engaging in various theretofore culturally disapproved forms of physical exertion--activities such as riding velocipedes (Bijker, 1995) or playing tennis (Dumez., 2010). A period during which the Maidenform organization's invention of a new brassiere technology and its embodiment into the newly invented latex composite allowed women to escape the physical constraints of fashionable corsets and engage in all manners of corporal activity using A-, B-, C-, and D-sized fashionable brassieres.

Historical research on technological change, absent cultural fashion. Organizational studies of technologies define them as non-human processes that transform inputs into outputs. Technologies can do so with greater "efficiency," defined as a lower ratio of inputs to outputs, or with greater "effectiveness," defined as better outputs according to measurable criteria. Technological "progress" denotes increases in either efficiency or effectiveness, or in both.

The historical organizational studies of change in technologies generally focus on technological progress, de-focalizing culture's impact. To take but one example, Abernathy's (1978) exhaustive history of technological progress in the automobile industry virtually ignores every cultural factor affecting the car's technological development. Abernathy, for instance, either ignores or provides retrospective accounts about why speed, acceleration, and the inception of auto bodies became criteria of automotive progress. Abernathy also remains mute about fashion waves in the size of cars or in auto bodies and about how repeated auto body fashions cumulated into fashion trends, such as the trend

that gradually lowered the height of auto bodies by two and one half feet over a fifty-year period (Robinson, 1958).

To instantiate the argument, technological studies of the automobile technology are not well equipped to explain why the fashionable six-thousand pound iconic, civilian version of the military "High Mobility Multipurpose Vehicle," better known as the "Humvee" or "Hummer," reached a peak sales of 71,524 Hummers in 2006, plunging to sales of 2,000 by 2009, the same year that the equally iconic Prius's U.S. unit sales climbed to one million units. Attributing this change to gas prices does not fit empirical data revealing a 2008 decline in gas prices (http://gasbuddy.com/gb_retail_price_chart.aspx). More importantly, it contradicts studies indicating that artifacts remain unfashionable, become fashionable, or loose fashionability, regardless of their purposefulness, usefulness, or price. Indeed, economists recognize that, in the case of "luxury goods," demand for such goods increases with their price precisely because they are more expensive and denote greater higher fashion status (Veblen, 1899).

Historical Examining Both Technological Change and Cultural Fashions

A recent historical fashion study, not to be macabre, considers U.S. organizations' production of technologies of capital punishment; it reveals that the fashionable use of the hanging technology gave way to the fashion for the electric chair, which in turn was replaced by the fashionable gas chamber, and subsequently by the currently fashionable technology of death by lethal injection (Denver, Best, & Haas, 2008).

Historically, each execution technology did come with a purportedly technological rhetoric legitimating it on two bases. First, each technology was lauded for its greater efficiency—, the ratio of the cost in the production of viable electric chairs to deaths as an output, for example. Second, each

technology was championed and on the basis of its greater effectiveness in meeting the the U.S.

Constitution's eighth amendment's prohibition against "cruel and unusual punishment."

Denver, Best and Haas (2010), however, suggest that every execution technology produced by organizations involved not only a rhetoric of technological progress, but also cultural tastes propelling upswings in the technology's fashion wave and commensurate cultural distastes driving its fashion downswing. The fashion upswing in the use of the violent hangings technique satiated cultural tastes for the festive, public-executions described by Foucault (1977). This cultural taste, however, lost out to a long-standing cultural distaste, noted by Elias (2000), for barbaric-collective-macabre amusement, a shift that prompted both a decline in the fashionability of hangings and a general fashion trend towards executions. Likewise, the cultural fascination with electricity and the commensurate upswing in the fashionability of the electric chair technology gave way to a widespread cultural fear of electrocution and to the electric chairs' fashion downswing (Essig, 2003). The World War I cultural belief in the potency of gas as a weapon of war rendered the gas chamber fashionable, whereas the cultural revulsion to its World War II use as a technology of mass slaughter drove it out of fashion (Keagan, 1993). Finally, the triumph of the cultural values of the medical profession highlighted by Starr (1982) continues to impel the growing rise in the fashion upswing in the execution technologies by lethal injection. This, arguably, until this medical technology's violation of the cultural Hippocratic Oath, will render injection technologies unfashionable and make room for a new cultural taste underpinning the next, fashionable, execution technology.

In summary, organizational historical studies of cultural-technological fusions have sharpened their focus on how cultural fashions influence technologic change and on how technological change influences cultural fashions. This sharpening, however, provides only one of two answers to this article's initial question: why is it so pressing to study organizations' production of cultural and technological

fusions? We argue in the next section why digital modes of production, over the last twenty years, have caused lightning-fast changes in fashions as a phenomenon.

The Evolution of Fashions in Fusions

We assume that three types of forces drive the digital acceleration in fusions' fashion substitution and scope. One force is the capacity of digital devices and programs to engender the rapid selection in the blueprint of fusions. Digital devices and programs make it possible to visualize culture-technology fusions that could simultaneously both satiate customers' cultural tastes and their technological preferences. More importantly, digital visualization enables the depiction of many variations of fusions. It makes it possible to select one or more and to launch them into fashion.

Digitalization not only accelerates the development of fusions' blueprints. With respect to the second force, it also has the potential to accelerate the embodiment of digital blueprint in various substrates: material, digital, or combined. Organizations use the Web to accelerate the location of such substrates. They use digital devices and programs to speed up how fast blueprints are embedded into these substrates, resulting in fusions. The Web speeds the travel of digitized global information about fusions to customers who can render certain fusions fashionable.

With respect to the third force, the Web sends back to organizations digitized feedback information about whether their fusions are now becoming fashions. Organizations, whose fusions are not becoming fashionable, have to respond by reinitiating the third process--this, ad seriatim.

In summary, digital modes of organizational production make organizations capable of managing an extraordinarily complex cultural and technological coevolutionary process. One part of the cycle enables: blue-printing, producing, and transmitting potentially fashionable cultural-technological fusions. Another part of the cycle, captures customers' reactions to these fusions, reinitiating the first part of the cycle for fusions that remain out of fashion; this ad seriatim. These three processes speed up

the two key dimensions of fashion outcomes: the substitution of fashionable fusions over time and these fashions' speed of travel across organizations, industries, and nations.

Three Variants of Digital Modes of Production

We distinguish three variants of digital modes of production that produce fusions or intensify their cultural or technological facets. First, what we call "beautifications" denote the organization use of digital modes of production to enhance the tastefulness of relatively efficient and effective artifacts. Second, what we call "digitizations" denote the use of digital modes of production that enhance the efficiency or effectiveness of tasteful artifacts. Finally, what we call "concoctions" denote the use of digital modes of production to fuse novel efficient or effective artifacts with artifacts characterized by novel tastes.

Digitization. Consider the so called "clones" that dominated the market for personal computers until the 1990s. Clones were virtually undifferentiated at each price point in terms of the size of their random access memory (RAM), the speed of their central-processing-units (CPU), and their data input-output (IO) transfer rate to and from hard disks of different sizes.

As Eisenman (2006) has shown, however, in the early 1990s, there emerged what became an industry-wide beautification of computers which then competed not only along technological preferences, but also on the basis of their fashionability. A few organizational producers of computers— Next, Apple, or Alienware--employed digital visualization to explore variants of aesthetic computer blueprints. They also employed computer devices and programs to embed these aesthetics into new substrates in order to create computer fusions with greater taste-appeal to their users. Finally, the image of these beautiful computers could travel quasi-instantaneously across the infrastructure of the Web as could consumers' reactions to these fusions.

Beautification need not only alter digital artifacts. The pre-digital technology for fashionable buildings, for instance, used drawings and the building of scaled models. The architectural fashion initiated by Frank Gehry results not only from a keen sensitivity to modern architectural taste and to a practiced familiarity with the usage of modern building material and technologies. It turns largely on another example of beautification brought about by the use of the digital Computer Automated Design programs (CAD) for large-scale architectural design (Boland, Collopy, Lyytinen, & Yoo, 2008). The architectural CADs used by the Gehry Partners, LLP organization enable the envisioning of architectural design, the embodiment of these visions in precise three-dimensional graphical renditions, engineering plans, and construction sequences. At an organizational level, such digital embodiment of architectural vision speeds up the cooperation of architects, engineers, and builders (the AEBs) working off common Web-based digital platforms which speed the two-way translation of architectural design. The transmission of CAD-generated building visualizations also increases the rate of substitution in architectural fashions and the speed of their global travel.

Digitization. Perhaps the most common examples of digitization occur in the realm of cultural artifacts, movies, or computer games, for instance, which exploit every aspect of digitizing technologies--pixilated screens in concert with new digital technologies like Computer Animation Programs (CAP) to render or animate movies, and their 3D renditions using special glasses. Their fashionability and fashions have increased rapidly because of the speed of their production and transmission and the massive growth in gross revenues they can yield. Various commentators debate the figures; however, until recently, The Prince of Persia: The Sands of Times by many reports had become the most profitable video game, grossing in excess of three-hundred million dollars worldwide, even when these estimates grossly underestimate real revenues by excluding digital devices like DVD and gaming platforms. These figures, however, are dwarfed by the gargantuan digitization of the movie form. The "Fox" network of organizations, comprising an alliance with many organizations from which they could source various

digital media (one appropriately called "Web Digital"), produced the movie <u>Avatar</u>, for example, which has reportedly generated gross revenues approaching three billion dollars worldwide.

Concoctions. We now find concoctions with almost no precedents because they bring together newly invented digital technologies and incipient cultural tastes. The "techno" musical genre, for instance, not only replaces pre-digital instruments like the harp with entirely new digital synthesizers and programmed sound tracks. It also draws upon long-forgotten incipient tastes like those of serious composers like Iannis Xenakis. Techno fashions can evolve rapidly and travel globally through all forms of legal and illegal Web conduits.

Likewise, concoctions of fashionable social-networking digital platforms constitute another type of fashionable fusions. In the U.S., the MySpace fashion wave has already been replaced by the Facebook wave, and the Facebook wave is being threatened by Bing, which is vying to become the next, fashionable social-networking platform.

In summary, beautifications, digitizations, and concoctions tend to displace pre-digital with digital modes of production. Readily available digital devices, programs, and access to the Web is creating more fusions and drawing them into fashions with comparatively rapid increase in the rate of fashion substitution in fusions and in the speed of their global travel.

The Pre-digital Market for Technological-Cultural Fusions

The cultural perspective on fashion has paid limited attention to their production. A casual reading of the literature suggests that the focus instead has been on analyzing fashions, be it their history (c.f. Elias, 2000) or how they are signified (c.f. Barthes, 1967), communicated (c.f. Barnard, 1996), interpreted (c.f. Baudrillard, 1972), or consumed (c.f. McCracken, 1990). There are some minor exceptions to this tendency. Bourdieu (1984 pp. 231) touches upon the supply and demand of tasteful

artifacts as does Caves (2000). Neither of them, however, crosses the cultural taste and technological preferences divide to examine the supply and demand for fashionable culture-technology fusions.

Blumer's insights on fashion emerged from what he called a "fashion mechanism" in the "women's fashion industry." Blumer noted the tripartite nature of this industry's market. First, there were the demand-side suppliers—the organizations staffed by designers that conceived of haute couture dresses, seamstresses that produced a few samples of these dresses, and the fashion models that walked designers' samples down runways.

Second, Blumer recognized, standing between the suppliers and consumers, the buyers—whom he described as the "…the unwitting agents of a fashion consuming public whose incipient tastes the buyers are seeking to anticipate." Buyers would select a few among many dress samples and send them to manufacturers and producers of consumers, purchasing prêt a porter, for example. We use the term "intermediaries" to describe a class of organizations like those that employed the buyers which Blumer saw at work: buyers who both familiarize themselves with the excessive supply of innovative fusions— too many fashion designers, rock bands, actors populating "winners take all" industries--and screen out the few they sense will satiate demand-side buyers' cultural tastes.

Third, Blumer (1969) recognized the demand side where women would purchase dresses that met these tastes. Blumer (1968) defined taste somewhat vaguely as an "organic sensitivity to objects of social experience," proposing that it "operates as a sensitive selector, giving a basis for acceptance or rejection" of fashions in women's adornment, particularly, and in cultural-technological fusions, more generally. So, according to Blumer, fashion suppliers tended to sense correctly consumers' taste, whereas according to Bourdieu (1984) the organizational suppliers that did tended to survive and thrive, whereas those that did not tended to meet their demise.

Blumer's (1969) foundational theory of fashion has inspired many recent studies of fashion belonging to the organizational perspective (c.f. Abrahamson, 1991; Czarniawska-Joerges & Sevón, 1996;

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Kieser, 1997). He ignored, however, that women's adornments are fusions of both tasteful artifacts and technological devices—the hoop skirt and the armature supporting it (Dumez., 2010). So, surprisingly, Blumer (1969) provided the first market theory of fashion in culture-technology fusions. Equally surprisingly, Blumer (1969) did not realize that he did.

The Digital Market for Technological-Cultural Fusions

Markets for cultural-technological fusions also have a tripartite structure with a supply-side populated by organizational suppliers, demand-side populated by consumers, and intermediary organizations standing between suppliers and consumers. This superficial resemblance, however, masks major difference markets for digital fusions and how they function.

The Digital Supply Side. First it should be noted that digitization is causing Blumer's market mechanism for fashion in women's dress to become a thing of the past. On the supply side, with respect to blueprinting, a declining number of organizations have designers designing on paper. As is the case with Ghery Partners, LLP, designers trace out preliminary designs on digital tablets. They then build more complex blueprints using CAD programs, and they transfer them over the Web. Blueprinting also speeds the sourcing of existing fabrics from different parts of the globe and the creation of new fabrics—Gortex, Spandex, and blended fabrics—that can be embedded in varied blueprints.

When it comes to production, the mass-customization of clothing also makes it possible to visualize the idiosyncrasies of individuals' body shapes and to use programmed, digital devices to mass-customize clothing fitting the visualizations of customers' body idiosyncrasies. Even when suppliers do not employ mass-customization, digital programs and devices play a variety of roles ranging from placing orders, keeping track of these orders, cutting the fabric, and so on (Uzzi, 1997).

As Blumer (1969) noted, consumers' tastes "operates as a sensitive selector, giving a basis for acceptance or rejection" to particular fusions. The most pressing challenge for supply-side organizations,

therefore, is to correctly sense or guess consumers' taste for fusions and to alter those that are not becoming fashionable. The greatest transformation in digital fashion markets, therefore, involved the coevolution process we mentioned above wherein organizational suppliers of fusions can receive extremely rapid and granular feedback about consumers' consumption of the fusions they supply and the extent to which these fusions are becoming the cutting-edge of fashion.

Digital Disintermediation. Digitization is also beginning to accelerate the fashion substitution cycle by bypassing the fashion buyers as the mediating organizations standing between organizational suppliers and consumers. Digitization disintermediates buyers of women's dresses, for instance, by streaming digital video feeds of fashion runways over the Web directly to remote customers who can then instantaneously Web-order their preferred dresses. All is not lost for buyers, however, who, by gaining digital access to choices of the rich and famous, gather some leading information about collective taste. However, here too, the Web transmission by supply-side organizations of fusions weakens the role of mediator organizations.

The digital demand side. The disintermediation of mediating organizations and their replacement by a greater array of fusions on the Web may increase both the range of fusions that become fashionable to different pockets of consumers with similar tastes. Moreover, suppliers' Web feedback mechanisms may also increase the speed with which suppliers can converge on fusions satiating consumers' tastes in such pockets.

In summary, in the case of the digitization of the market for women's dresses, the supply side of digital markets for fashionable fusions can speed up fashion cycles, as a result of the digitalization of visualization, material sourcing, production, Web travel, and remote consumption of fusions. Web feedback also provides much greater speed in the alteration of fusions. Mediating organizations may become disintermediated, with the result that many more pockets of consumers with different tastes

might find fusions satiating their tastes directly. Finally, it is interesting to consider that CADs may become unfashionable. So that the digital enablers of fashions in fusions may, themselves, become fashionable, resulting in a digital fashion in the production of digital fashions.

Variants of the description in the markets for women's fashionable adornment fusions caused by digital systems of production and consumption could be told for many markets and organizations. Indeed, we have pointed to changes in the architectural market triggered by Gehry Partners, LLP's digital visualization using architectural CADs. This article briefly perused how in the market for computers, Apple beautified clones transforming them into computer fusions. Likewise Paramount Picture's use of CAP and 3D has altered the production and travel of movies in that market. Finally, we briefly considered McDonald's exploitation of consumer feedback in the fast-food market.

Expanding Fashion Theory's Scope Condition to Fusion

The following passage from Veblen reveals two of scope conditions of fashion theory.

Under the partriarchal organization of society, where the dominant actor was male (with his dependents), the dress of the women was an exponent of the man whose chattels they were . In modern society , where the unit is the household, the womans' dress sets forth the wealth of the household to which she belongs (Veblen, 1894).

First, this passage sets the the tone for a point that Czarniawska-Joerges & Sevón (1996: 24) made persuasively, that fashion studies have scope conditions that restrict them to the study of largely inconsequential phenomena, because of their lasting association with femininity in an ever-patriarchal society. Second, and consequently, that the scope restriction in the study of fashion confines it to a narrow set of aesthetic artifacts--interior décor, art, or literature—that have to be relaxed because these restrictions originate from stereotyped conceptions of femininity.

The cultural fashion of aesthetics is still vibrant, but well plowed. The organization perspective on fashion has moved to new terrains by developing and testing theories about fashionable techniques,

those used in managing business organizations (Abrahamson, 1996; Czarniawska-Joerges & Sevón, 1996; Kieser, 1997). More recently, scholars have detected such fashions across marketing techniques (Cornelissen & Lock, 2000), CEO pay-for-performance techniques (Rost & Osterloh, 2009), financial techniques (McGoun, 1996), accounting techniques (Carmona & Gutierrez, 1998), IT (Wang, 2010), and strategic-management techniques (Clark, 2004). By now, fashion studies have spilled out of business studies into science (Starbuck, 2009), medicine (Burnum, 1987; Siverstein, 1997), diets (Barnet, 1995), urban design (Czarniawska & Sevon, 2005)and educational policy (Birnbaum, 2000).

The industrial revolution made technologies a male mechanism of acquiring wealth (Shenhav, 1999). Taste, expressed in women's fashion, served to symbolize men's wealth (Veblen, 1899). It might be time to define the scope conditions of a theory fusing cultural tastes and technological preferences.

Blumer and Bourdieu's Scope Conditions

Blumer (1969) states that fashion holds sway only when "…the pretended merit or value of the competing [artifacts] cannot be demonstrated through open and decisive test."   According to Blumer (1969), therefore, the scope conditions of a theory of fashion are circumscribed by the criteria consumers use to select or reject fusions as fashions. For Blumer, collective "taste" provides the criteria guiding the selection of fashionable artifacts, operating "…as a sensitive selector, giving a basis for acceptance or rejection" of these fashionable artifacts. Taste is an "organic sensitivity to objects of social experience." In the case of technologies, therefore, Blumer (1969: 284) leaves us with the notion that calculated, measured, technological criteria of efficiency and effectiveness guide technological choice.

Fusions, however, fall along a continuum of cultural to technological criteria that consumers employ to determine their choices of such fusions. Analytically, this means that artifacts towards extreme poles of the continuum should not be considered artifacts and might be studied more effectively using either theories of technological or cultural choice. It also means, however, that the

study of many different types of fusions along the continuum falls within the scope of an organizational theory of fashion in fusions-- this because choice of cultural-technological fusions incorporates choices based *on the addition of* cultural and technological criteria of varying complexity. So, "the pretended merit or value of the competing [artifacts]" becomes even harder to "demonstrate through open and decisive test," and fusions tend to be pushed further into the realm of a revised theory of fashion studies.

The point can be made more precisely. What criteria constitute the tastes influencing cultural choice? Bourdieu (1984) provides the most cogent and eloquent answer. For him, these schemes are made up of extremely rich sets of dualities, each of which defines the poles of a choice criterion:

> … high (sublime, elevated, pure) and low (vulgar, low, modest), spiritual and material, fine (refined, elegant) and coarse (heavy, fat, crude, brutal), light (subtle, lively, sharp, adroit) and heavy (slow, thick, blunt, laborious, clumsy), free and forced, broad and narrow, or, in another dimension, between unique (rare, different, distinguished, exclusive, exceptional, singular, novel) and common (ordinary, banal, commonplace, trivial, routine), brilliant (intelligent) and dull (obscure, grey, mediocre), is the matrix of all the commonplaces which find such ready acceptance because behind them lies the whole social order.

It is a system so oversaturated with criteria of taste that Bourdieu remarks,

> …the pairs of qualifiers, the system of which constitutes the conceptual equipment of the judgment of taste, are extremely poor, almost indefinite, but, precisely for this reason, capable of eliciting or expressing the sense of the indefinable.

Thus, numerous, varied, and blurred networks of criteria tend to guide judgments of cultural taste. On the flipside, professional associations of engineers might tend to reach consensus around relatively fewer, less varied, and clearer technological criteria. But here, too, we find a continuum. Technological criteria become more varied as organizations use them to differentiate their offerings in the eyes of customers. In the automobile industry, criteria of speed, acceleration, safety, fuel consumption, computerization, and customizability are rendering technological choices increasingly indeterminate for consumers. Moreover, taste criteria—automobile size, car color, auto body shape, interior design, branded nation of origin--are being added to the growing number of technological

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criteria. So, to repeat, "the pretended merit or value of the competing [artifacts]" becomes even harder to "demonstrate through open and decisive test," and fusions tend to be pushed further into a revised theory of fashion studies.

This proliferation of criteria for choosing fusions calls for a revised theory of fashions in cultural-technological fusions.

Some Questions

The richness of a theory of fashions in cultural-technological fusions puts it well beyond any kind of formal proposition. Any such propositions would be premature. At this point, this section can only raise a few questions.

Above, the article pointed to a possible array wherein the criteria of choice for technological-cultural fusions ranged along a continuum. Consumer criteria driving consumers' choices of different artifacts would tend more or less towards the cultural or technological pole of the continuum. Both what we called beautification and digitization can move culture-technology fusion along this continuum. In the case of the Apple Air, for instance, Apple moved this fusion too far towards the cultural pole of the continuum. The extreme tastefulness of the Air came at a very high technological price; a small disk drive and slower CPU, as well as no CD-ROM drive. Apple may have overused beautification in this instance, explaining the unfashionability of the Air among Apple's consumers. Apple had the resources to absorb such a mistake, but would smaller organization have ? So do certain organizations thrive, survive, or meet their demise depending on whether they find the optimal balance of cultural and technological criteria driving consumers' choices of the fusions they produce?

Dynamics

Blumer (1969) notes that :

Collective taste senses and selects those forms supplied by organizations on the supply side of markets that best embody their incipient taste; yet, at the same time [taste] undergoes refinement and organization through its attachment to, and embodiment in, specific social forms.

Fashion trends take the form of the intensification of a fashionable artifact along one or more of their dimensions—the century-long decrease in the width of dresses, for instance (Abrahamson & Eisenman, 2008). Robinson (1975) revealed a fashion trend in auto bodies, Young (1937) and Richardson and Kroeber (1940) in women's dress, Robinson (1976) in men's hirsuteness, and Abrahamson and Eisenman (2008) in management techniques.

Technologies also undergo periods of gradual evolution (Anderson & Tushman, 1990; Tushman & Anderson, 1986). Moreover, as we noted above, our depiction of digital markets also describes a digital coevolutionary process unfolding at a much faster rate. One part of the cycle enables: blue-printing, producing, and transmitting potentially fashionable cultural-technological fusions. Another part of the cycle, captures customers' reactions to these fusions, reinitiating the first part of the cycle for fusions that remain out of fashion; this ad seriatim. The question remains whether digital fashion markets will cause fashion trends in cultural-technological fusions?

Fashion trends also come to an end. As Blumer (1969) noted,

The terminal points of fashion trends are of special interest. Sometimes they are set by the nature of the medium (there is a point beyond which the skirt cannot be lengthened or shortened…but frequently they signify a relatively abrupt shift in interests and taste.

Likewise, fashion trends' technological developments also abruptly shift. What happens when cultural or technological facets of fusions undergo such a shift when the other does not?

Conclusion

To repeat, our thesis is that cultural and organizational perspectives on fashions must be brought together to begin studying fashion in cultural-technology hybrids. This is needed not only

because fashion in these hybrids have received little sustained attention, but also because the digital system of production has caused them to multiply and has altered the fundamental structure and function of markets for fashions.

Throughout this article, we maintained a distinction between cultural taste and technological preferences. We used them as the element fused in digital artifact. We speculated that cultural-technological fusions might vary along a continuum along which the basis of consumer choice may vary. Yet, it remains a question for future studies whether the analytical distinction between cultural taste and technology preferences will remain analytically useful. Alternatively, culture taste and utility preference might be so intertwined that this distinction is becoming an outdated dichotomy.

Likewise, the term "modernity" is typically associated with cultural taste, as one cannot speak of modernist technological progress. On the flipside, the term "progress" is typically associated with technological preferences, as we do not speak of progress in cultural modernity. Cultural-technological fusions, however, also fuse notions of modernity and progress.

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