

CGIP: MANAGING CONSUMER-GENERATED INTELLECTUAL PROPERTY

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Two related trends characterize the recent past: value propositions are migrating from the physical to the informational, and value creation is shifting from firms to consumers. These two trends meet in the phenomenon of “consumer-generated intellectual property” (CGIP). This article addresses the question: “How should firms manage the intellectual property that their customers create?” It explores how CGIP presents important dilemmas for managers and argues that consumers’ “intellectual property” should not be leveraged at the expense of their “emotional property.” It integrates these perspectives into a diagnostic framework and discusses eight strategies for firms to manage CGIP. (Keywords: Consumer Behavior, Intellectual Property, Innovation Management, New Product Management, Competitive Advantage, Consumers, Product Design)

In 2009, when Facebook was in its infancy, its management was amazed to discover that Vin Diesel, the cult movie star of films such as *Pitch Black* and *Fast and Furious*, had over one million “likes” (he now has well over 86 million). This number was an order of magnitude more than that for any other person. The traffic Vin Diesel’s content alone attracted undoubtedly contributed to the social network’s phenomenal growth. As Diesel was later to remark: “Facebook owes me billions of dollars for boosting its profile.”¹ While Diesel obviously benefitted by gaining exposure on Facebook for his personal brand, he received not a single cent from Facebook. He did get a phone call from the social network’s management demanding that he reveal the secret of his page’s popularity. Worse yet, due to Facebook’s IP policy, the content that Vin Diesel created on the site, and that drew so many users to Facebook in the first place, was no longer exclusively his—it now also belonged to Facebook.

Facebook is not alone, but it typifies a significant business phenomenon of the 21st century: much of the value and intellectual property nowadays lies in information generated by customers, consumers, and users, rather than by firms themselves. Indeed, today, information is increasingly the basis of value, and consumers are considered co-creators thereof, and the entities who actually bring this

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forth through their use of, and engagement with, products. This was alluded to by Glazer more than twenty years ago, who noted “a shift from information as a support for the classical (usually physically based) notion of a product or service toward information as a wealth-generating asset in its own right.”² This is in line with the mindset of service-dominant logic,³ which holds that instead of firms marketing to customers, they instead market, or co-create, with customers. Thus, rather than a firm marketing goods to its marketplace, it now exchanges services with that customer base to the benefit of both parties. This is not only a phenomenon that concerns social media sites, which often base their entire business models upon attracting, collecting, mining, and repurposing user-generated content to drive ad sales. It also affects more traditional business models. For example, Michael Powell was a loyal customer of retail giant Home Depot. He observed that a

number of Home Depot employees were being injured when cutting wood for customers at the store. To solve this problem, he developed a finger guard, called “Safe Hands,” to protect workers from the blades of the radial saws, and demonstrated it to the company in 2004. Home Depot, delighted with the clever customer’s idea, then commissioned a third party to manufacture the innovation and installed it in Home Depot outlets throughout the U.S. When a shocked Michael Powell protested at the appropriation of his ideas, the company rejected his claim for compensation. Subsequently he took the firm to court, and in 2010 a U.S. district court judge ordered the company to pay Powell \$3M in punitive damages, and a further \$2.8M in legal fees. This was followed by a jury decision that Home Depot should compensate Powell \$15M in restitution.⁴ This is clearly a creative consumer innovating in and for a company, which in turn treated the consumer disrespectfully by misappropriating the innovation without compensation or consideration. In the end, the company suffers both financially and from a reputation perspective. This case yields three lessons: First, customers can be a valuable source of innovation for firms; second, firms need to manage these consumer innovations carefully; and third, if firms manage this process poorly, the financial and legal consequences can be severe.

While the two examples just presented seem poles apart, they are in fact part of the same phenomenon, namely, the value of the intellectual property that customers generate, and the dilemmas of managing it. While the posting of a “selfie” on Facebook, and the invention of a safety device might seem of very different value, the situations are actually not that clear-cut. When the creative offering is social/symbolic, *who* creates is critical to the perception of value. In creative offerings that are instrumental/functional, *what* is created is critical to value. In the case above, “selfies” or photographs generated massive traffic to Facebook because they

were Vin Diesel's, whereas the average Facebook member generates only the traffic of their friends. On the other hand, in the case of the finger guard, "what" the innovation could do matters much more to Home Depot than who created it. People with good ideas, or those who use their intellect to create something valuable, are faced with three general choices. They can withhold the idea altogether or legally protect it outright, both of which might enable them to extract rents from it. Or, they can share it in the commons. In most cases, it is a choice between protecting and sharing ideas. Historically, by usually opting to protect their work, firms and entrepreneurial individuals have generated and exploited intellectual property: "creations of the mind" for which exclusive rights are recognized.⁵ These exclusive rights pertain to a variety of intangible, non-physical assets, including musical and artistic works, discoveries and inventions, and words, phrases, symbols, and designs.⁶ With the exception of trademarks, the intellectual property legislation in most countries has the broad objective of "promoting progress" (e.g., the U.S. constitution, article I, section 8, clause 8). Creators and/or copyright owners benefit because there is an incentive for inventors and artists to create and make their work available. The reasoning is that unless they are legally entitled to capture the full value of their creations and extract rents, those who create and invent will not have sufficient incentive to do so.

The rise of the information age has seen a major shift not only in the creation of intellectual property, but also in society's attitudes towards it, where the creation and use of modified products are carried out by an increasing number of individuals, often without any moral and legal considerations.⁷ The diffusion of user-generated content has been driven by the internet, which enables the instantaneous spreading of information at infinitesimally low cost, as well as the ready availability of inexpensive yet very powerful devices (computers, tablets, and mobile phones) loaded with innovative software and production tools for all sorts of applications, ranging from music to movies and cookery to chemistry. The resulting democratization of creation and production has seen the rise of the "creative consumer."⁸ At the same time, consumer-generated content is becoming the new intellectual property, and consumers are increasingly creating, not merely consuming, value for firms. This gives rise to what we term "consumer-generated intellectual property" (CGIP)—IP produced by consumers rather than only by firms.

Traditionally, intellectual property has described "a wide variety of property created by musicians, authors, artists, and inventors," with the law of intellectual property typically encompassing "the areas of copyright, patents, and trademark law."⁹ The intentions of these laws are to encourage the development of art, science, and information by granting certain property rights (such as protection and exploitation) to those who invent or create. Copyrights, for instance, preserve "original works of authorship" that are fixed in a tangible form of expression (literary, dramatic, musical, artistic, and certain other intellectual works, both published and unpublished) and give the owner the exclusive right to reproduce, alter, perform, or display the copyrighted work. Patents, on the other hand, require the detailed public disclosure of a novel and non-obvious invention, product, or process. Like copyrights, patents are "negative rights," that is, patents are rights to

prevent others from commercially making, using, selling, importing, or distributing a patented invention without permission.¹⁰

Throughout history, musicians, authors, artists, and inventors have created and consumers have consumed. Now this situation is being turned on its head. For a variety of reasons, particularly due to modular technologies and the ease of access to and spreadability of information, consumers are now modifying, appropriating, and indeed creating. The notions of intellectual property—who owns these creations and the rights to them—are becoming increasingly contested. Based on the existing definition of intellectual property, CGIP might be defined as “consumer-generated creations of the mind that build upon, change, improve, or repurpose existing commercial offerings and/or platforms. These include literary and artistic works; designs; and symbols, names, and images.”¹¹ What is contentious is that owners of proprietary offerings tend to assert that they have the rights to these innovations, while creative consumers would argue that these works were the “creations of *their* minds.”

What makes consumer-generated creations a source of conflict is that, from the perspective of the firm, it is an issue of money and control, while on the consumer’s side it is about creativity and emotion. Indeed, any act of creation has both an intellectual and emotional component, as creations are considered part of one’s extended self: they have both intellectual property and emotional property.¹² Emotional property can be defined as the emotional investment in an act of creation, and the attachment to the creation itself, such that the creator *feels* ownership of the creation. Now while a company may legally appropriate the intellectual component of a consumer’s creation, the creator less easily divests their emotional investment. Moreover, it is the consumer’s emotional investment in the creation that drives their subsequent decision making and behavior in response to the firm’s actions. As recent research has shown, it is emotional value that is the primary driver of consumer decisions.¹³

The question of how firms should manage CGIP is becoming an increasingly critical dilemma for executives—the majority of whom have probably not even begun to consider the options, or what approach is optimal in what context. On the one hand, there is the potential to lose control, not only over the firm’s IP, but also over the potential innovations and revenue streams from CGIP. On the other hand, there is the very real possibility of alienating consumers, especially the most creative consumers, by appearing to be dictatorial and acting like a bully. Being too controlling might easily reduce the submission of the best content and ideas, and kill the goose that really can lay golden eggs. These are the issues that we address in this article.

Building on Borgmann’s philosophy of information which distinguishes information about reality, information for reality, and information as reality,¹⁴ we consider the relationship between types of information and IP. We then construct a framework of the eight strategies available to executives for managing CGIP, and illustrate these by means of a series of associated short case studies. While firms may leverage the “intellectual property” that their customers produce, they should also understand the importance of emotional property to consumers.

CGIP and the Creative Consumer

Creative consumers are hardly a recent phenomenon. As far back as the Model T, Ford customers—especially farmers—adapted their cars to perform all kinds of tasks that the manufacturer had never intended, regularly using them as a power source for driving generators, mills, and lathes. Ford’s remedy for what it obviously, although never expressly, viewed as an appropriation of its IP was to threaten to void the warranty on the vehicle. However, consumer creativity, and the IP issues it raises, is a far more prevalent issue today, particularly as a result of networks, product malleability, and the ready availability of inexpensive creativity tools. Managers can no longer only rely on knee-jerk reactions such as negating guarantees. The ubiquity of consumer creativity, and its seemingly infinite variety, require a far more thoughtful managerial approach.

We have two observations: one about the valence of consumer ideas; another about the complexity of the dilemma that CGIP can pose to managers. First, the *valence* of consumer creativity and its effects on the proprietary offerings of firms (and the IP attached to them) can vary from the negative (and possibly even dangerous) to the positive. A negative example is that when sales of methamphetamine were banned in most countries after World War II, the demand for it as a recreational drug spawned its production by individuals, who used readily available cold medications containing the chemical Benzedrine as feeder stock to cook “crystal meth” in home laboratories. This undesirable development of CGIP led to a prohibition of over-the-counter medications containing Benzedrine and pseudoephedrine, including well-known brands such as Sudafed, Advil Allergy Sinus Caplets, TheraFlu, and Tylenol Flu NightTime Gels. A more positive example of CGIP comes from Toyota Motor Corporation, which like many other car manufacturers initially frowned on people altering their products. However, after learning of the exploits of Toyota Prius hybrid owner Ron Gremban, whose modifications to his car not only allow him to achieve far superior engine performance and driving distance, but also to charge it in his garage, the company now says it may be able to learn from such individuals. “They’re like the hot-rodders of yesterday who did everything to soup up their cars. It was all about horsepower and bling-bling, lots of chrome and accessories,” said Cindy Knight, a Toyota spokeswoman.¹⁵

Second, the nature of consumer creativity, and the dilemmas it presents for managers with regard to intellectual property, ranges on a spectrum from simple to complex. This can be illustrated by a selection of scenarios on the hacking of AIBO, Sony’s well-known electronic pet. Sony launched AIBO in 1999. The first two letters of the acronym (AI) stood for “artificial intelligence,” while the last two letters (BO) stood for “robot.” The word “AIBO” was also the Japanese word for “companion,” or “pal.” AIBO could perform certain movements and act out certain behaviors, and was also programmed to feign emotions such as “missing” the owners when they were away, and “happy” at seeing them on their return. It wasn’t long however before some AIBO owners, perhaps bored with the limited range of actions the \$2000 toy could perform, hacked AIBO’s operating system to make their cyberpets dance, jive, and perform a wide host of “unauthorized” actions, for which Sony threatened to sue them.¹⁶

We sketch the CGIP dilemmas that might face managers at Sony with regard to potential scenarios of the hacking of AIBO (or indeed similar consumer creativity actions on any other proprietary technologies) on the spectrum, from simple to complex, in Figure 1 below. It is obvious that the complexity of the dilemma depends on the nature of the consumer’s creativity, and also the extent to which the consumer attempts to extract rents from this. In the case of AIBO, if the consumer hacks the product solely for their own benefit, then concerns about ownership of IP are low for both the consumer and the firm. A consumer hacking the product and sharing this information as a member of some community built around the product/brand would probably find this to be more valuable because of the social capital it could build for them, but the firm might not be that concerned about this limited exposure. When the consumer not only hacks the product, but then also distributes this freely by broadcasting the code online, the firm will care much more about the IP issues involved. Finally, the stakes are highest for both the consumer and the firm when the consumer not only hacks the firm’s product, but then broadcasts and distributes this by selling the hack.

The value of consumer creativity should not be under-estimated. While some observers of the phenomenon are more skeptical, and believe that truly valuable innovation usually comes from within the firm,¹⁷ recent empirical evidence suggests that creative consumers often trump professionals on a number of dimensions. Poetz and Schreier¹⁸ staged a real-world competition for ideas between a firm’s professionals and those generated by users. The challenge was to solve an effective and relevant problem in the consumer goods market for baby products. Senior executives within the firm (blind to their source) then judged the submissions along the dimensions of novelty, customer benefit, and feasibility. The researchers found that user-generated ideas scored significantly higher on novelty and customer benefit. Perhaps not surprisingly, user-generated ideas scored a little lower on feasibility, but the average values for feasibility were relatively high overall, suggesting that feasibility was not necessarily a serious impediment. As a result

FIGURE 1. The CGIP Complexity of Dilemma Spectrum

Complexity of Dilemma		Simple ←————→ Complex				
Creative Activity		Consumer modifies a product for a special purpose and/or for pleasure.				
Sharing Activity		Not Shared	Invention privately announced and instructions (such as code) made available within a closed community	Invention openly announced and instructions (such as code) given away for free	Invention openly announced and given away as an executable application for free	Invention publicly marketed and sold as an application or as a modified product
Concern about CGIP ownership	Consumer	Low	Medium	Medium	Medium	High
	Firm	Low	Low	Medium	High	High

of the advantages to be found for firms in exploiting customer creativity, a number of authors¹⁹ have noted the opportunities to be found, and have suggested ways of managing and encouraging them.²⁰ Alexy, Paola, and Salter²¹ note that by enabling consumers to submit ideas, firms gain insight into consumer preferences and consumer engagement with their offerings. This is because customers may have two types of knowledge: first, knowledge about their own needs and problems; second, knowledge relevant to the particular firm's needs and problems—especially related to problems that the firm might not be able to solve itself, and ideas about offerings the firm may not have even thought about yet.²²

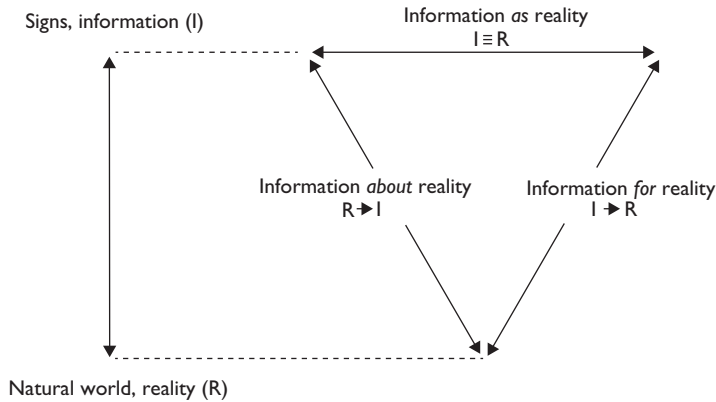
However, these authors go on to add that managing a firm's interactions with creative outsiders is complicated by issues regarding the role of intellectual property ownership and protection, both of which can drive costs and managerial effort. In previous work, Alexy and his colleagues²³ observed that a firm's IP strategy could either kill or enable its open innovation activities. This need not be the case, they argue: firms who use IP strategically will not only benefit from open innovation, which includes consumer creativity, but also enhance the financial returns they obtain from it. The work focuses on a broad range of outsiders, including suppliers, collaborators such as other firms, institutions and universities, and lead users.²⁴ Whereas the broad groups of such creative outsiders will tend to have a more formal communication with the firm, creative consumers might not. They might even want to avoid any contact, formal or informal! This raises the question of how firms should think more seriously and comprehensively about intellectual property in the domain of the creative consumer, or CGIP. Our objective in this article is to provide ways of conceptualizing CGIP and for firms to develop strategies for dealing with the issues surrounding CGIP. This necessitates attempting to answer the question: In today's information age, is there a correspondence between type of information and type of intellectual property? In order to do so, we turn to the work of the philosopher Borgmann.

Types of Information

Borgmann, in his book *Holding on to Reality: The Nature of Information at the Turn of the Millennium*,²⁵ provides two critical insights into the nature of information. First, information is heterogeneous and that distinct types can be observed; and second, each type of information in its own way shapes our engagement with the world. The first is useful in exploring the types of intellectual property, the latter in how CGIP might be managed.

Borgmann argues that there are essentially three types of information (see Figure 2): information *about* reality, information *for* reality, and information *as* reality.

- *Information about reality* involves information that in some way reflects or reproduces some aspect of reality, and includes such things as reports, photographs, or, more abstractly, maps—these are representation of reality.
- *Information for reality* involves injunctions such as musical scores, recipes, and blueprints—these are instructions on how to shape or change reality.
- *Information as reality* involves on the one hand *information about information* (meta-information) such as a dictionary, and on the other hand *information for information* such as a computer program.

FIGURE 2. Types of Information According to Borgmann

Borgmann's information types constitute a historical progression from signs of the natural world (for example, spoor indicates the presence of animals, thunder the imminence of rain), through cultural transmission that involves some form of performance or enactment (for example, a play has to be acted, a prayer intoned), to technological information where information constitutes its own reality or "hyper-reality."

For our purposes of understanding consumer-generated offerings, we do not need to retain Borgmann's specification that *reality* be limited just to the "natural" world. Indeed, we can replace the term reality with "something" and that "thing" can have ontological reality within the world that it is constituted. Thus love, as constituted in the world of emotions, is just as real as a lake in the natural world. Similarly, the number pi, as conceived in the abstract world of mathematics, is just as real as a pine tree.

Shared Creations: Their Legal Status

The sharing of ideas has a long history, and individuals have long been willing to contribute intellect and labor *without the expectation of material benefit*. This is how "sharing" differs from "protecting" intellectual creations to exploit them in a commercial sense. Beginning in 1857, the first Oxford English Dictionary was a huge cooperative project between scholars and individuals throughout the English-speaking world. T. James Murray acted as editor as part of his other appointments and commitments and none of the contributors were financially rewarded.²⁶ In medicine, for "orphan" drugs the markets are relatively small because the incidence of certain diseases is low. However, since suffering is acute, many scientists and their employers donate time to researching these products.²⁷ Like open source software, innovations in skateboarding, windsurfing, and snowboarding products have been led not by manufacturers but by enthusiasts, who freely reveal and share their discoveries with all other aficionados.²⁸

What some believe to be open source and others to be proprietary has been the source of significant conflict. For example, entrenched providers of services, such as the “branded yoga” of Bikram Choudhury, have been vilified by purists who demand and assert that an age-old pursuit such as yoga should be available to all. Some have even established an alliance dedicated to this called OS (“Open Source”) Yoga Unity.²⁹

Antonio Meucci set up a voice communication link in his Staten Island, NY, home that connected the second floor bedroom to his laboratory. He submitted a *patent caveat* (an antiquated, renewable provisional application and intention to file a full patent application at a later date, discontinued in the US in 1909) for this device to the U.S. Patent Office in 1871. However he failed to mention the electromagnetic transmission of vocal sound in the document, and also didn’t pay the annual \$10 fee to maintain the *patent caveat*.³⁰ In 1876, Alexander Graham Bell was granted a patent for the electromagnetic transmission of vocal sound by undulating electric current that became the core basis of the modern telephone. The simple lesson is that the first to file patent owns the creation; if you fail to protect your idea, someone can come along and patent it. What is the legal status of shared ideas? The simple answer is that they have none. However, what if you wanted to consider their legal status before you share your ideas? What options do you have?

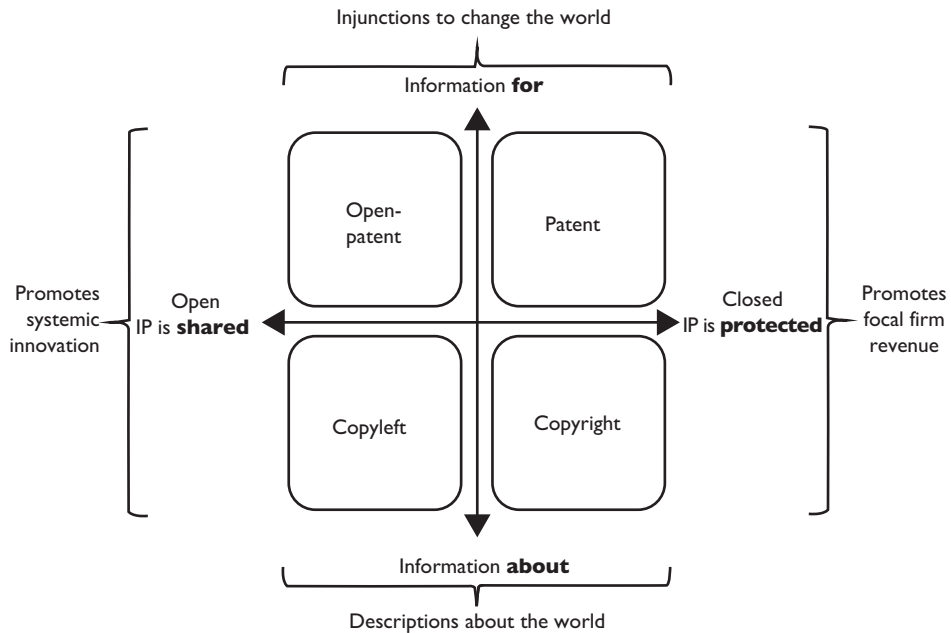
Sharing Creations: Legal Options for Organizations

If organizations want to share their ideas, but at the same time take credit for them and protect their destinies, they have two options. The first is “copyleft,” a form of licensing that can be used to maintain selected copyright conditions for works such as computer software, documents, and art. Under copyleft, creators may give every person who receives a copy of the work permission to reproduce, adapt, and distribute it, and they may require that any resulting copies or adaptations are also bound by the same licensing agreement.

A second alternative for organizations is the so-called “open patent.” Open patented inventions can be freely distributed under a copyleft-like license. These works can be used as-is, or improved, in which case the patent improvement would have to be re-licensed to the institution that holds the original patent, and from which the original work was licensed. This frees all users (individuals and/or other organizations) who have accepted the license from the threat of lawsuits for patent infringement, in exchange for their surrendering the right to build up new patents of their own (in the specific domain for which the original license applies).

Creations: To Protect or to Share?

There are obviously benefits for the organization in both the protecting and sharing of creations. The fundamental benefit of protecting creations is that the owner shields the revenue streams that will flow from it. The greatest advantage of sharing creations is that systemic innovation is promoted and stimulated: This is why Elon Musk gave away the patents (making them open patents) to Tesla’s innovative battery technology. His intention is to kickstart the entire electric vehicle market. These dichotomies are illustrated in Figure 3, juxtaposed against a contrast

FIGURE 3. Types of Information and IP Options

of whether information is *for*, or *about*, creations. This enables us to understand and compare the notions previously discussed, namely, patents and open patents, and copyright versus copyleft.

Of course, the ultimate question is, given the revenue stream and exclusion of competition that information suppression protects, why would organizations want to share their creations? The reasons, which all organizations need to understand, are three-fold. First, many open source and voluntary contribution communities, consisting of both organizations and consumers, have been described as “gift economies”³¹ in which goods and services are given to others with no reciprocal obligation from the recipients. Sharing is the lifeblood of these communities. Creativity, innovation, and development services can be considered “gifts” provided by members of the community. These are in turn combined into a product that is “given away” to users, who are not obligated to repay the gift. However, those who do contribute feedback, bug reports, feature requests, and so on are helping improve the product in a continuous quality improvement loop.

Second, it enables firms to tap into the sheer personal enjoyment that inventing and showing off their creations provides the consumer. Being the first to change or hack a product, or the first to solve a major problem means less when the creative consumers are unable to share their achievements.

Third, the benefits of sharing enable the construction of symbolic capital for the inventor or creator, be they individual or organization.³² Conversely to economic capital, the more one gives away, the more symbolic capital one accumulates

in the form of prestige, status, and reputation. Thus, those who give away more innovations have higher perceived status in the marketplace. Additionally, those who contribute more creations to their community are held in higher regard and reputation. Importantly, this alternative form of capital can be converted into economic (or social) capital, and vice versa.³³ For example, from an individual perspective, George Hotz, who hacked the original iPhone and Sony's PlayStation 3, gave these hacks away free. In doing so however, he attracted enormous media attention, job offers, and awards that benefitted him socially and economically. From an organizational viewpoint, Microsoft has earned huge symbolic capital and positive media attention by reversing its initial stance and now embracing and contributing to the open-source platform Linux.

To summarize, we contend that even in cases of copyrighted or patented material, organizations may be well advised to work with consumers and encourage their innovation. To this end, managers need to consider a range of strategic options with regard to CGIP.

What are a firm's strategic options in regard to CGIP?

A firm has two basic options with regard to CGIP: it can either be positively or negatively disposed to it. The strategies it then adopts toward CGIP will in both cases range according to whether there is more focus on consumers, more focus on the firm, or a balance between the two. This will obviously depend on two perspectives: the extent to which the firm perceives the consumer to have either high or low emotional property vested in the innovation, and the extent to which the firm has the potential to control the intellectual property. Following, we describe the eight strategies a firm can adopt toward CGIP (Figure 4) and illustrate each with a case that typifies it.

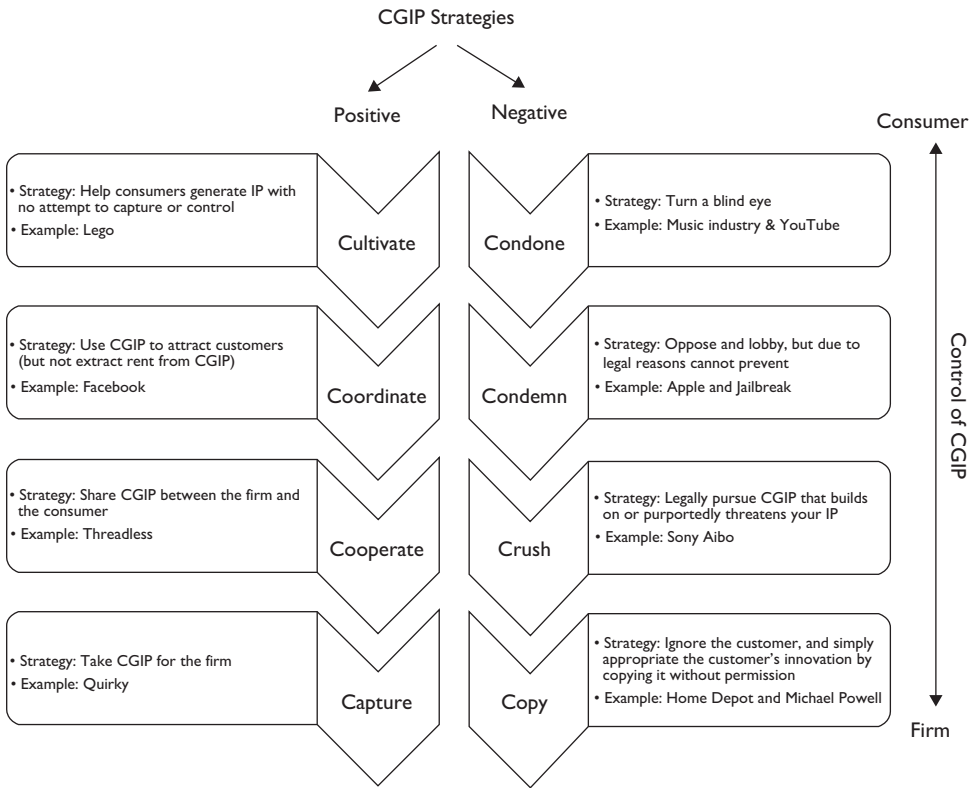
Cultivate

Cultivating is a very positive strategy for the consumer, one under which the firm helps consumers generate IP without any attempt to capture or control it. A good example of this is Lego and its Mindstorms Robotic Invention System (RIS), a sophisticated kit with an intelligent brick computer, various sensors and actuators to build models that can carry out various movements. Soon after the release, Lego discovered that consumers were hacking the programming language and developing applications and extensions to the original code.³⁴ Rather than issuing cease and desist letters, Lego embraced the consumers' creativity and cultivated CGIP through an online community forum ("a place for you to explore & share your Robots") that invited enthusiasts to meet and exchange their builds. However, the company made no attempt to control or exploit this in any way. What does Lego get from this? The company garners a fiercely loyal and enthusiastic group of loyal customers who express their love for the brand by continually innovating with and contributing to its product mix. Indeed, it would be fair to say that these innovative customers satisfy all the requirements of the definition of a brand community.³⁵

Coordinate

In the case of the "coordinate" strategy, the firm is positive to CGIP and facilitates its creation. It does this not to extract rent from CGIP, but rather because the

FIGURE 4. CGIP Strategies



presence of CGIP will attract customers, from whom rent can then be generated in other ways, such as through advertising. Facebook is a good example of a “coordinating” firm. There is little intellectual value in the millions of status reports, photographs, birthday greetings, and jokes that get posted every day. However, by providing a forum for people to display and share this information, Facebook enables a process for attracting traffic from hundreds of millions of their friends on a daily basis, all of whom want to know what is happening in their social circles. These huge numbers of eyeballs obviously represent substantial advertising revenue for Facebook.

Cooperate

Under the “cooperate” strategy, the firm encourages consumer creativity in order to share the returns of CGIP between the firm and the customer. A good example of this is the firm Threadless.³⁶ Its website hosts a regular competition in which customers propose designs for T-shirts. Other customers then vote on these before managers decide which designs get to be manufactured and sold by Threadless. Threadless has outsourced all creativity to consumers who compete for the prize and status awarded to the winning design, and all market research

to individuals in the crowd who, through their votes, signal approval and intentions to purchase particular T-shirt designs.

Capture

Under the “capture” strategy, the firm positively encourages consumers to generate CGIP that it then captures as its own in order to advance its business. For example, the invention company Quirky invites individuals to submit new product ideas to their site for consideration. If an idea is favorably received by the Quirky community and its management, it is then developed into a prototype and in many cases eventually turned into a commercial product. In exchange for Quirky funding this development process, the inventor assigns all IP to Quirky. If the product is a commercial success, Quirky shares some of the profit with the inventor and the community, but retains the IP into perpetuity. Many products developed in this way are simple household products (the best-seller is a bendable power strip of which over 600,000 have been sold) that can be found for sale in Best Buy, Bed Bath & Beyond, Target, and on Amazon.

Condone

In the case of the “condone” strategy, the firm is essentially negative to CGIP, but simply turns a blind eye to it rather than confronting consumers. Jill and Kevin had an interesting and different dance procession down the aisle for their wedding, to the beat of Sony artist Chris Brown’s song “Forever.” They posted the video on YouTube, and it has received more than 100 million views to date. Sony would have been within its rights to demand its removal as an infringement of copyright.³⁷ However, the firm chose to take no legal action—perhaps because it didn’t want to appear a bully or more probably because the artist had serious PR problems as the result of a recent court case, and the happy video was a way of rehabilitating that. Nowadays, it would appear that many music firms simply condone the infringement of their copyright when consumers include music videos of their artists on video sharing sites such as YouTube, unless they do so for commercial intent.

Condemn

Under the “condemn” strategy, firms clearly disapprove of what they perceive to be infringements of their IP. They might actively lobby against such activities and also retaliate by refusing to honor the warranty of products that have been tampered with. However, firms stop short of actively pursuing consumers or taking legal action. For example, Apple has expressed its opposition to the “jailbreaking” of its iPhones, broadcast that the warranties on jailbroken iPhones are invalid, and continually attempted to render the iPhone unhackable. However, it has not yet prosecuted those who develop or execute the jailbreak.

Crush

Those firms that adopt a “crush” strategy toward CGIP will take decisive action against consumer IP violations. For example, when Jose Avila made furniture for his apartment exclusively from Federal Express boxes and displayed them on a website, FedEx immediately sent him a cease and desist letter demanding that

he stop using the boxes for purposes other than what they had been intended for, and take down the website.³⁸ Similarly, Sony originally sued owners who had hacked their AIBO pet to perform actions that “had not been authorized” by Sony.

Copy

Under the “copy” strategy, firms ignore the customer and simply appropriate the customer’s invention by copying it, without explicit permission. This may be a sin of omission (simply being unaware of the customer), or one of commission (purposely ignoring the customer, and banking on the asymmetry of power between firm and customer). Whether Home Depot was merely unaware of where Michael Powell’s innovation had come from, or whether they had purposely disregarded the source, is not the point. The fact remains, that the firm was found to have copied his intellectual property.

Combining Intellectual and Emotional Property

As we have seen, CGIP presents a number of interesting dilemmas for managers: dilemmas of ownership, dilemmas of control, dilemmas of perception, and ultimately dilemmas of the purpose of the firm. Managers are forced to weigh the benefits and costs of consumer-generated intellectual property, consider whether to exercise exclusive control or to share the CGIP, and the effect that their actions will have on consumers’ perceptions of the firm and indeed their future willingness to engage. These dilemmas range from simple to complex as the impact of CGIP on the firm’s offering increases; it becomes especially acute when CGIP constitutes the bulk of the firm’s offering (as is the case with Facebook, Threadless, and Quirky). This leads us to the question of how to manage intellect and emotion.

Information as Reality and Information as Engagement

Although intellectual property focuses on information about and information for reality, many of the interactions, particularly online, are *de facto* composed of Borgmann’s third type of information: information as its own reality. Now while Borgmann saw this as an alienation from the natural world, Verbeek³⁹ views this as an ambivalent mediator of reality. Having reinstated this third type of information, Verbeek goes on to argue that technological information *existentially* realizes and *hermeneutically* represents; that is, technological information *enables* modes of action and interaction while *shaping* (amplifying and attenuating) interpretations and experiences. The point is that technological information is a mode of engagement in and of its own right. One does not have to go far to realize this: you are what your Facebook page says you are, a product’s quality is what it is rated as by consumers—both independent of the physical reality of you or of a product’s quality. While the technological information and physical reality may be correlated, the relationship is a lot looser than some would believe.

From Intellectual Property to Emotional Property

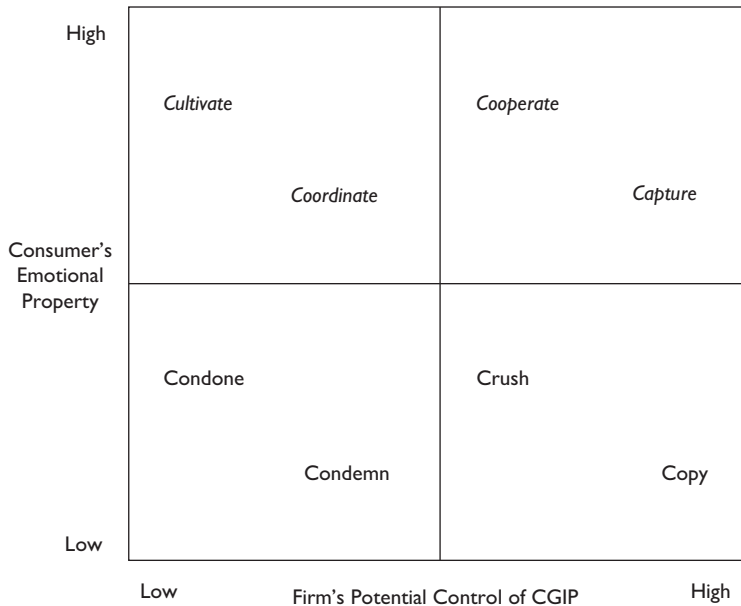
If we view information as a mode of engagement, we can see that experientially it has both an emotional (visceral, subjective) as well as an intellectual (factual,

objective) component. Information is both comprehended and felt; it is a creation of the heart and of the head. This is an important point to bear in mind when managing CGIP, for the management of intellectual property is about the management of only one side of engagement. Effective management of CGIP without taking cognizance of the emotional aspect can be problematic. Thus we have proposed a complementary term to intellectual property: emotional property. If intellectual property is defined as legal rights to creations of the mind, emotional property can be defined as the emotional investment in or attachment to creations of the heart and mind.

Viewed this way, the backlash against certain companies' appropriation of CGIP could have been expected. For while a company can capture CGIP, it cannot appropriate or negate the emotional investment that consumers have in their creations. Thus the *manner* in which CGIP is appropriated and to what *ends* it is used become important considerations. Firms need to contemplate how *overtly* or *covertly* they assume CGIP and whether the ends to which the CGIP is put is *assonant* or *dissonant* with consumers' emotional values. Recognizing the *de facto* existence of consumers' emotional property and its experiential legitimacy (even if it has no legal status) should lead managers to always ask the question: what *meaning* does this IP have to the consumer? For example, the re-use of a person's picture in promotion of a social media site may have very different reactions if that person had recently died. The emotional property principle might be: "understand and ask." That is, understand the meaning and seek permission, regardless of whether you own the IP or not.

Emotional property is exclusive to the consumer, and its value can range from low to high. For example, a simple product review on Amazon may represent low emotional property to the poster. In contrast, a piece of music that a consumer has composed, recorded, and posted on YouTube might have high emotional property to its creator. Firms usually only care about intellectual property and their control over it. In Michael Powell's case, his invention represented high intellectual property to Home Depot, but also high emotional property to Powell himself—a combination for which some strategies are much more appropriate than others. We explore these relationships further in the matrix in Figure 5, which combines the value of the emotional property to the consumer and the firm's potential to control the intellectual property. We use the term "potential control," as there is always a *cost* and an *uncertainty* element in the attempt to exercise control. For example, car manufacturers could sue consumers who hack the engine maps of their cars (the code is copyrighted), but the cost in terms of legal fees and negative publicity combined with the uncertainty of legal outcomes has, to date, deterred them. We term the resulting grid the "EPIP" (Emotional Property-Intellectual Property) matrix.

We can also map the 8 Cs previously referred to onto the four quadrants of the EPIP matrix to offer managerial diagnostics and advice. The logic of the EPIP matrix is as follows: along the horizontal axis, the Cs run in sequence from less to more control that the firm can potentially exercise over the CGIP. Consumers naturally try to maximize their own interests. Undeniably, they prefer it when firms respond with the most positive strategies (from Figure 4), but even when firms adopt a negative stance towards CGIP, consumers support strategies that allow

FIGURE 5. Emotional Property-Intellectual Property (EPIP) Matrix

them to retain the most control over their IP. Thus positive and negative strategies map onto the vertical axis.

Managers can use the EPIP matrix to gain insight into the nature of the consumer's intellectual contribution. The firm first needs to gauge the value of the intellectual property to itself and the extent to which it has the potential to control it. Then it must ascertain the value of the emotional property to the creative consumer; and, having done this, it must then adopt one of the appropriate Cs as its strategy. We discuss each of the four quadrants and their optimal associated strategies in turn.

Where the creation has low emotional property value to the consumer, as well as low control over intellectual property value by the firm, the strategic options are to *condone* or to *condemn*. Jill and Kevin obviously had a high emotional attachment to their wedding and the wedding dance. They just so happened to choose the Chris Brown song, which was not really central to their creativity, and they could conceivably have used any similar piece of music. While their choice represented an infringement of Sony's copyright, the firm chose to *condone* their action and this had positive results for the firm. Consumers who created jailbreaks for the Apple iPhone obviously had high emotional stakes in their innovations. While Apple did not approve of their actions, the firm realized that the costs of either pursuing them directly, or alternatively embracing them would be prohibitive. The firm therefore merely chose to *condemn* them.

Where the creation has high emotional property value to the consumer, but the firm has limited potential to control the intellectual property, the strategic options are to *cultivate* or to *coordinate*. When Lego learned of consumers hacking

its product and creating new code, it chose to *cultivate* their creativity, and by doing so enabled innovation to grow and a brand community to evolve. The emotional property value of a single selfie to an individual on Facebook is relatively low, and is also of relatively low intellectual property value to Facebook. The firm therefore chooses to adopt the positive strategy of *coordinating* the CGIP efforts of millions of individuals and facilitating their creation. The presence of countless millions of individual CGIP contributions in turn attracts customers, from whom rent can then be generated.

Where the creation has low emotional property value to the consumer, and the firm has high potential to control the intellectual property, the strategic choices are to *crush* or to *copy*. Perceiving the hacks by individual owners of its AIBO product had low emotional property value to them, Sony chose to *crush* their efforts by issuing cease and desist letters. Home Depot perceived (wrongly) that Michael Powell's innovation had low emotional property value to him. Instead of cooperating with Powell, the firm chose to *copy* his invention. While this might have been a feasible, if somewhat unethical strategy if the consumer had been unable to fight back, in this particular case the strategy failed badly for Home Depot.

Finally, in the instance where the creation has high emotional property value to the consumer and the firm has high potential to control the intellectual property, the strategic choices are to *cooperate* or to *capture*. Threadless chooses to *cooperate* with its customers, because it realizes that their designs have high emotional property value to them and also represent high intellectual property value to the firm. Importantly, Threadless shares the intellectual property with the consumer. However, while the individual innovation efforts of Quirky's customers are of high emotional value to them, and they also represent valuable intellectual property to the firm, Quirky chooses to *capture* this value. Unlike Threadless, Quirky takes exclusive ownership of the IP for all successful submissions, and the contributor may or may not be compensated, depending on the idea's eventual commercialization.

Conclusion

We have explored the phenomenon of consumer-generated intellectual property that arises when consumers rather than firms contribute content, innovate, modify, hack, or in other ways change or add value to the offerings of organizations. CGIP raises critical issues for managers who need to consider how their firms are going to deal with the myriad of problems and opportunities it raises. Obviously, the complexity of managing CGIP varies considerably, and this complexity varies with the value of the CGIP to both consumers and firms. Borgmann's insights into the types of information provide us with a lens for understanding the nature of CGIP and the legal actions firms might take in this regard. A firm's stances towards CGIP can be either positive or negative and there are four positive and four negative strategies that firms can implement in dealing with CGIP. However, we distinguish between intellectual property (which firms might care about more) and emotional property (which consumers might be more concerned with). We suggest the use of the EPIP matrix that allows managers to devise the appropriate strategies to deal with any conceivable CGIP issue that might arise.

The information contained in intellectual property generated by consumers has almost everything in common with the notion of information as a commodity, as discussed by Glazer.⁴⁰ In describing the “value of information,” he notes that unlike the typical economic good, information is not easily divisible; it is non-appropriable, abundant, and rarely exhibits decreasing returns to use. The intellectual property generated by a consumer can usually be shared with other consumers and firms. Unlike a physical good, when a consumer gives information away, they still have it for themselves. CGIP is plentiful, partially because of the modularity of many products, and also because of the ease with which consumers can now communicate, share, and improve their ideas. This is why it has an increasing return to use. Finally, the idea-generative activity of consumers does indeed “feed on itself.” As we saw in the Lego case, the more consumers who contribute, the more active the community becomes, the more new members join, and the more they in turn contribute. Not only do the numbers of ideas and contributions increase: the quality does as well: “This creates both the demand and conditions for production of subsequent [contributions].”⁴¹

Emotional property constitutes an important issue that has not previously been raised in the consumer innovation or marketing literatures. As we show, firms should take emotional property very seriously and deal with it carefully when encountering creative consumers. Managers should work hard at understanding the value of emotional property, because getting it wrong can have disastrous legal, financial, and reputational consequences for the firm.

Until recently, firms have focused on the exchange of manufactured goods,⁴² embedded value, and transactions. Now, a new dominant logic is emerging in which not only marketing, but indeed the entire outlook of organizations has shifted to a “continuous social and economic process”⁴³ in which the consumers as creators and co-creators play a far more equitable role. Astute managers will look beyond the boundaries of the organization to evaluate not only the intellectual, but also the emotional property of creative consumers, and select their CGIP strategy accordingly.

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