

Georgia State University

ScholarWorks @ Georgia State University

Film, Media & Theatre Theses

School of Film, Media & Theatre

Fall 12-14-2021

The Macintosh Professionals: Crises in Industrial Lore and Fan Reception of Apple's Desktop Computers

Taylor Olmstead

Follow this and additional works at: https://scholarworks.gsu.edu/fmt_theses

Recommended Citation

Olmstead, Taylor, "The Macintosh Professionals: Crises in Industrial Lore and Fan Reception of Apple's Desktop Computers." Thesis, Georgia State University, 2021.
doi: <https://doi.org/10.57709/25435864>

This Thesis is brought to you for free and open access by the School of Film, Media & Theatre at ScholarWorks @ Georgia State University. It has been accepted for inclusion in Film, Media & Theatre Theses by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact scholarworks@gsu.edu.

THE MACINTOSH PROFESSIONALS:
CRISES IN INDUSTRIAL LORE AND FAN RECEPTION
OF APPLE'S DESKTOP COMPUTERS

by

Taylor Olmstead

Under the Direction of Ethan Tussey

ABSTRACT

This thesis uses industrial discourse analysis and fan studies to posit that fandom has the power to intervene in moments when producers and brands thwart expectations generated by industrial lore. Steve Jobs' "Four Quadrants" strategy became a crucial piece of Apple's industrial lore is shown to influence the expectations of Apple fans. Negative fan reactions to new product launches will be used to demonstrate the impact of said lore and the openings it creates for dissent. Analysis of the industrial discourse surrounding the discontinued iMac Pro and redesigned Mac Pro determines the efficacy of fan interventions in eliciting a concession from Apple.

INDEX WORDS: Apple, Steve Jobs, Macintosh, Imac, Industrial design, Fan studies, Media industries

THE MACINTOSH PROFESSIONALS:
CRISES IN INDUSTRIAL LORE AND FAN RECEPTION
OF APPLE'S DESKTOP COMPUTERS

by

Taylor Olmstead

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of the Arts

Georgia State University

2021

Copyright by
Taylor Olmstead
2021

THE MACINTOSH PROFESSIONALS:
CRISES IN INDUSTRIAL LORE AND FAN RECEPTION
OF APPLE'S DESKTOP COMPUTERS

by

Taylor Olmstead

Committee Chair: Ethan Tussey

Committee: Diana Anselmo

Jade Petermon

Electronic Version Approved:

Office of Academic Assistance

College of the Arts

Georgia State University

December 2021

DEDICATION

This thesis is dedicated to the memory of my grandfather, James Olmstead, whose Power Mac G3 was the first “Pro” Mac I ever used...even if it was just to play solitaire.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the care and support of my family: Dave, Sherry & Bryan Olmstead. And I could not have written it without the love and affirmation of my boyfriend, Josiah Gorham.

I am deeply indebted to my advisor, Ethan Tussey, and my committee members, Diana Anselmo & Jade Petermon, for their insightful feedback and guidance during the writing process. I never would have grasped these concepts without conversations with my cohort, especially Kristina Busse and Mychal Shanks. The foundation for this work was laid by my undergraduate advisor and academic mentor Karen Riggs, who will dress me down for the length of these acknowledgements.

Graduate school can be a trying endeavor and I only survived it because of the wisdom and guidance offered by friends who pursued advanced degrees before me, including Brandon Bristol, Shaun Evans, Juli Horsford, Cameron Hubbard, Mary Chase Mize and Trenton Wirth.

Finally, the inspiration for all these words was a collection of “friends in my ears” whose podcasts about Apple kept me company while I acclimated to the city of Atlanta. Many thanks to all of those cited herein, but most especially Jason Snell. The many millions of words Jason has written and spoken about the technology industry have inspired all you are about to read. My only regret in this process is that I was unable to return the favor by completing a quest he sent me on many years ago. I hope this research serves as a suitable substitute for his Frösön covers, even if it’s less comfortable to sit on.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS.....	vi
LIST OF FIGURES	viii
LIST OF TABLES	ix
1 INTRODUCTION	1
2 THE FOUR QUADRANTS; A HISTORY OF THE MACINTOSH AND APPLES INDUSTRIAL LORE	13
2.1 Industrial Lore Methodology	14
2.2 Origins of the Four Quadrants.....	17
2.3 The Deification of Jobs	20
2.4 Delays and Drifts in the 2010s	22
3 BEGGING TO BE FLEECEED, FAN INTERVENTIONS	27
3.1 Fan Studies Methodology	27
3.2 Evangelists, Alphas & Mavens	33
3.3 Accidental Tech Podcast & The Mac Malaise	41
4 SERIOUSLY BAD-ASS; INDUSTRIAL ANALYSIS OF THE MAC BOOK PRO	51
4.1 The iMac Pro.....	52
4.2 iMac Pro Press Kit Analysis	56

4.3	iMac Pro Review Process Analysis.....	59
4.4	The Mac Pro	64
4.5	Mac Pro Press Kit Analysis.....	65
4.5.1	Mac Pro Review Process Analysis	72
5	CONCLUSION	79
	REFERENCES	83

LIST OF FIGURES

Figure 1: Apple Brand DNA Molecule.....	5
Figure 2: Timeline of the Product Design of the Apple iMac (1998-2021)	7
Figure 3: Power Computing Flyer from MacWorld Expo 1996.....	34
Figure 4: Cult of Mac Diagram.....	35
Figure 5: Stills from iPod Shuffle TV Spot	38
Figure 6: Still from the “Get A Mac” Campaign.....	39
Figure 7: Still from iMac Pro Reveal Video.....	56
Figure 8: Still from Mac Pro Reveal Video	66
Figure 9: John Ternus discussing the Mac Pro’s internals, in front of a 3D rendered cross section of the computer	67
Figure 10: 2019 Mac Pro next to the “Trash Can” Mac Pro.....	68
Figure 11: Brownlee discusses 8k video render times for Pro Macs.....	73
Figure 12: Morrison and Collaborators work at a Mac Pro	76
Figure 13: Ezarik’s trip to the Apple Store during her review video	77

LIST OF TABLES

Table 1: Four Quadrant Strategy Diagram.....	15
Table 2: Updated Four Quadrant Strategy Diagram.....	80

1 INTRODUCTION

This thesis will examine the discourse surrounding two high-end desktop computers released by Apple, Inc. in the late 2010s as continuations of the company's "Pro" product line. Apple's use of the term "Pro" for high-end products began in the early 2000s following Steve Jobs' return to the organization and his creation of the Four Quadrant product marketing strategy. This strategy divided the company's Mac family of products by their desktop or portable form factor and their target audiences, which Jobs defined as a dichotomy between "Consumer" and "Pro" customers. This strategic construction served the company throughout the 2000s and early 2010s, until it was faced with manufacturing constraints that delayed updates to their most specialized desktop: the Mac Pro. As a result of these constraints, Apple launched the iMac Pro in 2017 and almost immediately faced a backlash from its most ardent fans who felt that the product insufficiently served "Pro" users and blurred the boundaries of the company's Four Quadrant strategy. Their demands for a more "Pro" Mac better suited to their needs which fit more neatly within the company's previously defined quadrants resulted in a rare apology and strategic concession from the corporation. By evaluating the intersection of Apple's industrial lore and the expectations and interventions from the so-called "Cult of Mac," this thesis presents a potential opening for fan dissent within an increasingly corporatized media environment.

Steve Jobs returned to Apple Inc. in 1998 and brought the company from the brink of bankruptcy to its lauded position as the leading manufacturer of computers as lifestyle marketing objects. The firm's MacBook Pro and Mac Pro products have become prominent status symbols among technology workers and creative professionals (Marwick, 2013). As these sectors became

driving forces in the neoliberal economy, Apple and its “Pro” products gained considerable influence over the definition of professionalism within creative labor. From its position as the fourth-largest supplier of desktop personal computers (PCs) and the only mainstream manufacturer of PCs running an operating system other than Microsoft’s Windows, Apple has an outsize ability to set the course for an industry in constant transition (Potuck, 2021). Competitors often copy their industrial designs and they have directly influenced the desktop PC form factor as we know it today (Schaefer & Durham, 2007). Thus, any radical change the company makes to its products is subject to intense scrutiny from both the industry trade press and its notoriously devoted and outspoken customer base. As one of the most studied consumer groups in western culture over the past two decades, this fandom has had a considerable impact on the shape of fan studies within academia. Their propensity for promoting Apple products lead to widespread adoption of the term “Brand Evangelist” after it was coined by Apple marketing executive Guy Kawasaki (Kawasaki, 2015). However, since the death of founder and CEO Steve Jobs, Apple has experienced less full-throated evangelism from some of the most devoted sections of their base.

Beginning with the original iMac in 1998 and continuing through the development of more mobile platforms such as the iPod, iPhone, and iPad, Apple has closed off the internal components of their hardware devices. Schaefer & Durham (2007) have referred to this as the effacement of the computing device. This effacement spurred protest movements and even appeals for regulation from fans and users who advocate for a “right to repair” or modify the internal components of their devices (Rosa-Aquino, 2020). Fans have become increasingly frustrated as Apple has perpetuated this trend of effacement and spread their particularly limiting form of aesthetic minimalism to more product lines. Their attempts to enforce planned obsolescence and discourage end-user modification ultimately backfired with the 2013 Mac Pro, which fans derisively

nicknamed “The Trash Can.” As a symbol of effacement, a functionally limited computing device, and a chronically stagnant product, The Trash Can became the catalyst for a unique moment of fan rebellion. Through a months-long discussion via podcasts, blogs, YouTube videos, and other elements of convergence culture, Apple’s “professional” fans generated enough negative press to force the company to concede and backtrack on their campaign of effacement. The success of this campaign, I will argue, is due to both its timing and its use of previously established industrial lore promoted by Apple and its executives.

Wendy Chun has illustrated in *Updating to Remain the Same* that technology vendors must continually update their products and services to remain relevant in the neoliberal economies of the west. This constant updating creates what she calls a cycle of crises, which cuts through the typical information flow by “differentiating the temporally and temporarily valuable from the mundane, offering...users a taste of real-time responsibility and empowerment” (Chun, 2016). When faced with a rupture in their cycle of controlled crises, Apple attempted to regain control by redefining the “professional” customer for their Mac Pro product line. However, their new definition was met with resistance by customers and members of the Mac fandom. The company then prematurely canceled a flagship product and returned to the more traditional definition of professionalism supported by their most vocal fans and customers.

Examining this moment of resistance on behalf of the Mac fandom through the lens of fan studies and considering recent scholarship on the media industries demonstrates an opening for greater consumer agency during periods of technological and strategic change. By repeatedly voicing concerns through fan-owned channels, the so-called “Cult of Mac” established their agency as consumers and demanded significant changes to the objects of their fandom. This campaign turned some of Apple’s most renowned brand evangelists into critical mavens whose

pleas for a more professional Mac caught the ear of senior leadership inside the company. An analysis of how these fans conducted a months-long discursive battle over the nature of the term “professional” and its implications for computer hardware design demonstrates how consumers can advocate for companies to produce goods better suited for their needs.

John H. Takamura Jr. has studied the relationship between Apple’s hardware designs and the loyalty consumers have towards the brand. He proposes a conceptual framework of branding which imagines corporations’ value proposition as a molecule of DNA. In this Brand DNA, “the product attributes together with the brand attributes work in coordination...to build the overall consumer experience, ultimately leading to and or maximizing brand loyalty” (Takamura, 2007). From surveys with Apple brand loyalists, Takamura developed a molecular model of Apple’s brand based on the prevalence of specific qualities and keywords used to justify the purchase of computer hardware. Perhaps unsurprisingly, “professionalism” and “creativity” were among the qualities most frequently praised by Apple’s loyal customers. Takamura (2007) explains:

The ‘professional’ category contained approximately 14 words pertaining to a professional, elite, and high-end quality of the brand...The ‘professional’ category is associated with the ‘creative’ category as creative professionals use Apple™ products and have become associated with the product. This observation reoccurred throughout the study. The ‘creative’ category relates to the group category in that many loyalists viewed creatives as a niche group targeted by Apple™.

In other words, professionalism and creativity were viewed as core elements of Apple’s Brand DNA (see Figure 1). These qualities were often interrelated as loyalists tended to perceive Apple’s target market as primarily composed of “creative professionals.”

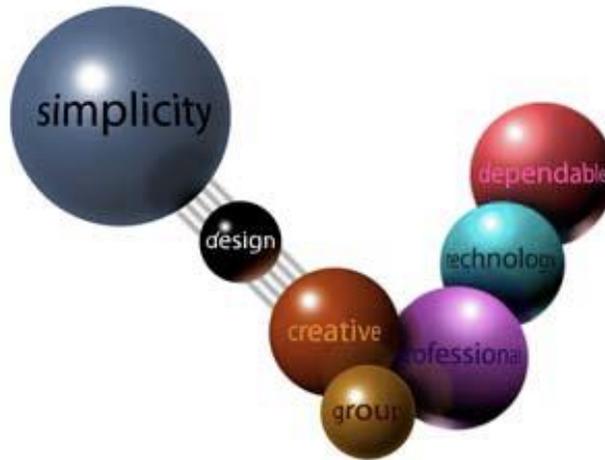


Figure 1: Apple Brand DNA Molecule

Note: The Apple brand DNA molecule as a 3-dimensional reassessment of the brand analysis bubble diagram and the resulting relationships between the fundamental elements of the brand. (Takamura, 2007)

Takamura doesn't identify which professions are deemed creative by Apple or its customers. Still, his Brand DNA model demonstrates that this amorphous collection of laborers is at the core of Apple's target market. In his conception of Apple's Brand DNA, Takamura links more traditional perceptions of the brand's utility to aesthetic qualities, such as simplicity, via product design. He explains that "Design as one small element within the Apple™ brand DNA molecule can potentially alter the entire Apple product genome through its relationship and connection with the other elements of creative, dependable, technology, professional, group, and simplicity" (Takamura, 2007). Thus, to understand the impact of any given product's design, we must analyze its aesthetic qualities (i.e., simplicity, color, materials, etc.) and its functional characteristics as a computing device.

Vilonia Rindova (2007) draws on Bourdieu's theory of cultural capital to argue for what she terms “cultural consumption,” which is “the consumption of products for their ‘art utilities’... This type of consumption fuels the demand for original products, thereby contributing to the processes of value creation through innovation....” The ability to judge a product’s originality arises from what Rindova calls a “connoisseurship consumption logic,” wherein consumers leverage their knowledge of functional design trends and ideological stances to differentiate between products. She specifically mentions Apple’s products as an exemplar of such connoisseurship, stating that “by creating products that vary in design form, technical architecture, and even intellectual tradition, Apple’s computers can be viewed as objects of connoisseurship and cultural consumption” (Rindova, 2007). According to her analysis, Apple customers derive cultural capital from both the act of purchasing a Macintosh and their demonstration of connoisseurship in choosing the “correct” Mac model.

Rindova (2007) goes on to argue that “Originality in form or in the combination of function and form increases the value of products as objects of cultural consumption because it enables consumers to test their judgments of value in the absence of proven basis for such judgments.” Thus, it is incumbent upon Apple to consistently create Macintosh computers that demonstrate originality in form, function, or a combination of the two to maintain the brand’s standing amongst connoisseurs. Rindova refers to the methods a company uses to support this originality as their “innovation strategy,” which “can be understood as combining both technological and cultural research and emphasizing “new concept” development, as much as new technological design development.” She notes that vendors can occasionally bolster their reputation for innovation in established fields such as automobile manufacturing and PC design by producing unexpected aesthetic designs that elide otherwise orthodox functionality. Apple’s admission that they

“backed themselves into a thermal corner” (Panzarino & Dillet, 2017) with the 2013 “Trash Can” Mac Pro demonstrates the potential downside of this particular innovation strategy. In placing a heavy emphasis on aesthetic innovation, the company created an industrial design incapable of intermittent functional improvements that would maintain its reputation amongst connoisseurs and professional users as “innovators” in the desktop computer market.

Apple solidified its reputation as an innovator in the industrial design of computer hardware with the original iMac, which debuted in 1998. After a few drastic re-iterations during the transition to flat-screen monitors, the iMac product line arrived at the origin of its current design with the launch of the G5 version in 2004 (See Figure 2).

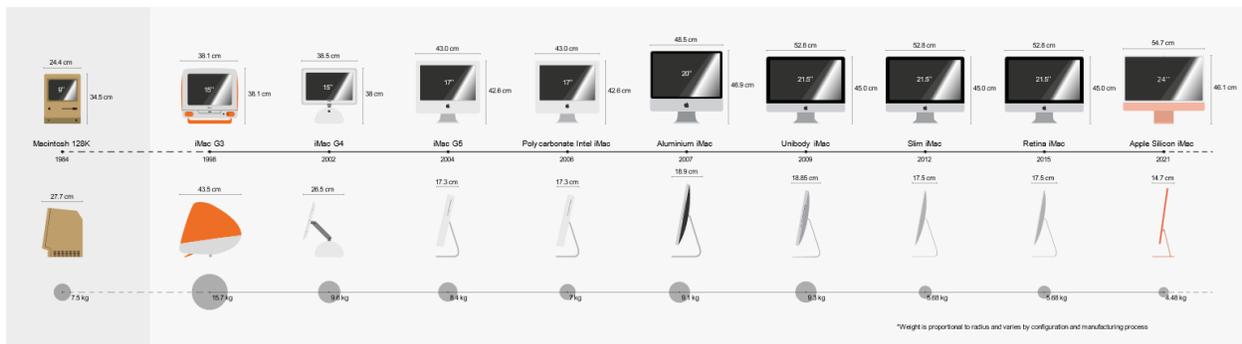


Figure 2: Timeline of the Product Design of the Apple iMac (1998-2021)

Note: The iMac G3 (1998) was the first product line designed around the computer’s integrated CRT monitor. From the iMac G4 (2002) onward, the computer has used various “flat screen” display technologies. The iMac G5 (2004), as analyzed by Schaefer & Durham (2007), has been the basis for all subsequent iMacs, including the iMac Pro (2017). (Piccoli Trapletti, 2015)

Schaefer & Durham (2007) have examined the social implications of the G5 iMac’s all-in-one design. The computational hardware of the device is mounted directly to the back of the monitor and hidden away by an opaque chassis. They argue that “The seeming immateriality of its design

numbs users to the presence of the machine as well as the implications of its reality” (Schaefer & Gigi Durham, 2007). They go on to evaluate Apple’s marketing materials for the machine, which use language typically reserved for modern art pieces and works of architecture. This language instills a belief that “The purchase of a Mac product distinguishes buyers as subjects who appreciate beauty and simplicity via association with the brand...The consumer buys into the Mac lifestyle by purchasing this ‘perfect computer’” (Schaefer & Gigi Durham, 2007). This emphasis on the supposed beauty and simplicity in hardware aesthetics guided the iMac product line through the 2010s and presented a significant selling point for the iMac Pro.

Eisenman (2013) has documented a u-shaped relationship between technical innovation in technology products and their design-related attributes. He notes that hardware aesthetics are emphasized when a new category launches and later in its life cycle when a product category is mature (Eisenman, 2013). Once a category reaches what Eisenman calls its “dominant design,” subtle visible changes signal difference between minor revisions, wherein

“Users are able to easily identify which other users have the most current model relative to those who have older models. This creates a “coffee shop” effect of sorts where users express something about their identities by self-categorizing into a pecking order based on attributing higher status to users with later models” (Eisenman, 2013)

I contend that when faced with continued supply chain delays affecting the manufacturing of a new Mac Pro, Apple-designed and marketed the iMac Pro as a revision on their long-running iMac design to capitalize on this coffee shop effect. From the introduction of the aluminum chassis iMac in 2012 until 2021, the only change Apple made to the iMac was to occasionally slim down the computer’s curved back as the miniaturization of internal components allowed (Snell, 2020a). When viewed as an iteration in the history of the iMac product line and the nine-year

stagnation in chassis design, the iMac Pro demonstrates a belief within Apple that the desktop computer had reached the low point of Eisenman's u-shaped curve and settled upon its "dominant design." It is telling then that Apple made no alterations to the existing form-factor when developing the iMac Pro. The design team seems to have believed that by simply anodizing the aluminum in a darker hue, they could generate the sort of coffee shop effect Eisenman discusses without investing in a complete redesign.

To understand why the drastic design changes of the Mac Pro and iMac Pro were so controversial, we must also analyze customer perceptions of Apple and their beliefs about the company's "Pro" hardware lines. Wang, Sakar & Sakar (2018) examined the company's customer base during this period and found that its most devoted consumers and fans considered Apple to be a "sacred brand." They defined brand sacredness as "the extent of a brand being perceived of possessing extraordinary and spiritual properties inspiring veneration that would make the brand distinct from other brands in the eyes of a group of brand devotees" (Wang et al., 2018). According to their analysis of Apple, specific individuals within a brand's audience move beyond mere loyalty to a form of attachment wherein the brand and its purported values become a part of the extended self. Wang et al. note that devotees often see products created by competing companies as inferior (even profane) in comparison to the sacred brand. They also find that the procession of an individual from loyal customer to devoted brand believer and evangelist creates a sense of "known group validity," which allows them to distinguish between fans of different communities or sects falling under the same corporate brand. Under this model, "Pro" Apple users are among the most devoted of the brand's believers/customers. Their perceived "known group validity" allowed them to separate themselves from the Windows PC market and even the more general Apple fan base. However, when the company began making drastic changes to their "Pro" product

lines, the enthusiasm these fans felt for the Mac quickly morphed into a sense of abandonment. Many of these devotees would scoff at such emphatic language, though, since the cultural norms of the technology and creative industries frame all consumption through a lens of entrepreneurial pragmatism.

In his ethnographic analysis of technology workers in New York's Silicon Alley during the early 2000s, Andrew Ross divides the laborers who support technology sector businesses into two groups: No-Collar workers such as copywriters, designers, and other creatives as opposed to administrative workers who are responsible for more traditional business tasks, such as sales, HR, or data entry. No-Collar workers, according to his definition, are "knowledge workers whose high-tech skills or aptitude for problem-solving wins them a measure of autonomy in a data-rich workplace...[a No-Collar worker] exercises self-management, if not self-employment, in the execution of their work; and who is accustomed to a contingent and casual work environment..." (Ross, 2003). For many of these workers, he argues, autonomy includes a sense of mastery over the technological tools of the modern workplace.

According to Ross, one of the critical examples of this division of labor is each side's response to Moore's Law. Named for an observation spoken by Gordon Moore, the co-founder of Fairchild Semiconductor, Moore's Law is a commonly cited piece of technology industry lore that states that computing hardware gets ever smaller and faster as a function of time, typically doubling every year (Moore, 1965). Ross uses Moore's Law to demonstrate the separation between the two classes of labor that support the technology industry and its adjacent creative fields:

"Yet for most employees who perform routine work with computers, Moore's Law simply translates into speedup on the job. It is not in their interests to go any faster..."

For no-collar employees, on the other hand, who fall above the knowledge labor divide, it is generally in their interests to have quicker machines, larger storage densities, and higher-speed access to internet resources. For them, Moore's Law is usually perceived as a benign principle, authorizing faster tools that allow them to further master and customize their work environment" (Ross, 2003)

In this construction personal computers become something akin to a craft tool for No-Collar Workers. Rather than viewing themselves as laborers within an industrialized process, they approach work as an almost existential challenge. Mastery of ever-faster tools allows for higher productivity and more significant states of so-called flow. For No Collar workers in the early 2000s and the various classifications of "knowledge workers" or "creative professionals" that followed them, this cultural justification of work as existential meaning and its attendant obsession with ever-faster hardware has meant a constant race keep up with Moore's Law. Using and mastering ever faster smaller or otherwise more "powerful" hardware has become crucial to maintaining cultural relevance and employment opportunities within these fields.

Alice Marwick builds on Ross's discussions of workplace bravado in her ethnographic study of Silicon Valley workers in the 2010s. She notes that during this period, the consumption of functional objects, including Apple computers, became a status symbol within the Silicon Valley technology worker subculture. During her field research, she observed tech industry culture in which "spending on clothes or luxury brand names for everyday goods was terribly gauche," however, "Apple products were an exception since electronics were considered necessary work tools." (Marwick, 2013). She notes that members of the Silicon Valley subculture are also quick to recognize the make and model of others' devices at the various networking events she attended during her research. The ideological exception carved out for work tools in general and

Apple products, in particular, should be considered in analyzing the various “Pro” tier Macintosh computers. In conjunction with Eisenman’s so-called coffee shop effect, this suggests that Apple was attempting to capitalize on the aspirational qualities of their brand. Product design decisions such as releasing a high-end device in an exclusive color allow easy visual separation between its supposedly ‘pro’ users and the ‘consumers’ using non-’ pro’ products with their ubiquitous silver aluminum chassis.

This thesis will demonstrate Apple’s adoption of the Four Quadrants product marketing strategy as industrial lore and how their failure to follow this lore when designing new “Pro” products in the late 2010s lead to a revolt amongst their users. The first section of this analysis serves as a brief introduction to the corporate strategy of Apple in the 1990s and 2000s to demonstrate the significance of Steve Jobs’ Four Quadrants strategy. The second section analyzes discourse about the nature of the “Professional” within the Apple fandom during the 2010s and how fan frustrations stemmed from the company’s previously communicated strategy. The third and final section contains analyses of two “Pro” desktop computers released by Apple during this period which demonstrate the company’s evolving strategic priorities and concessions to fan criticism. This thesis will conclude with a brief discussion of the potential effectiveness of fan intervention during moments of industrial crisis, particularly when corporate strategy runs counter to previously established industrial lore.

2 THE FOUR QUADRANTS; A HISTORY OF THE MACINTOSH AND APPLES INDUSTRIAL LORE

To establish the importance placed on Jobs' Four Quadrants strategy within Apple and its fandom, this section will establish the origins of this key piece of industrial lore. I will begin by reviewing the strategic and financial challenges which resulted in Apple's acquisition of NEXT and the reinstatement of Steve Jobs as CEO in the late 1990s. Particular attention will be paid to the company's decision to license the Macintosh Operating System (Mac OS) to third-party hardware manufacturers who built machines to serve the needs of specific professional niches, particularly in the print design industry. This period will serve as the baseline for discussing Jobs' radical decision to cancel these so-called "Mac clone" agreements and implement the "Four Quadrant" strategy for PC product marketing. A review of brand sacralization and deification will explain how this decision became an irrefutable element of Jobs' persona, particularly after his death from pancreatic cancer in 2012. The chapter will then demonstrate how Apple drifted away from the Four Quadrant strategy, particularly after the transition to using Intel-based processors for their Mac hardware in the late 2000s. This transition, it will be argued, created an external dependency that forced Apple to delay multiple product releases and resulted in a more diverse product line than Jobs' would have intended. This tension between fan perceptions of Apple's historical strategies, the lore of Jobs, and the realities of an Intel-based product line set the stage for the iMac Pro controversy analyzed in subsequent chapters.

2.1 *Industrial Lore Methodology*

To define the term “Pro,” relative to Apple’s Mac Pro and iMac Pro product lines the company’s infrequent and notoriously cryptic public announcements must be analyzed through a media industries framework. Given the scarcity of internal documentation available and the company’s notoriously tight-lipped executive team, a close reading of press releases, corporate events, and interviews published by trade publications will allow for the best understanding of their internal logic and strategies. Particular attention will be paid to the demonstrations and reviews Apple sanctions from third-party software vendors and trade publications before releasing new hardware. Though CEO Tim Cook ends each product launch by saying he “can’t wait to see what you do with it,” the company frequently telegraphs the intended uses for its hardware products through these demonstrations. They also illustrate the intended audience for each product through the promotional materials accompanying their press releases and the small but eclectic set of influencers and trade publications that receive free hardware to test and review.

Timothy Havens has argued for an analysis of this sort of corporate discourse, which gives credence to laborers’ agency within the context of structuring factors such as industrial economics and political circumstance. In his chapter, “Towards a Structuration Theory of Media Intermediaries,” Havens adapts Turow’s concept of “power roles” to identify individuals within media organizations whose interpretations of and actions within structural circumstances create what he calls “industry lore.” As discussed, and acted upon, by said intermediaries this lore serves as a Foucauldian “regime of truth” under which the globalized media industry operates. The process of industry lore influencing actions taken by individuals whose success or failure is then re-interpreted as evidence for or against said lore is what Havens refers to as structuration. This structu-

ration process, he argues, causes industrial lore to “[shape] cultural resources that perhaps billions of human beings draw upon in making sense of their lives and the world around them” (Havens, 2014).

Upon Steve Jobs’ return to Apple in 1997, he introduced a product marketing framework known as the Four Quadrants to simplify the company’s bloated Macintosh product lines. The Four Quadrants, as demonstrated below, are laid out in a grid with Desktop & Portable on the X-Axis and Consumer & Professional on the Y-Axis (Jobs, 1998).

Table 1: Four Quadrant Strategy Diagram

	Consumer	Professional
Desktop	iMac	?
Portable	MacBook	MacBook Pro

(Adapted from Jobs, 1998)

This framework led to the quintessential Apple branding nomenclature of X “Pro,” as in “MacBook Pro,” which separated its entry-level consumer-grade products from more expensive offerings in nearly all its product categories. When viewed through the lens of Havens’ structuration theory, it is apparent that Apple’s executive leadership team perpetuated this framework as a piece of internal industrial lore, at least until 2018. Havens notes that “industry lore is specific to the cultural industries and arises from unique features of those industries—namely the unknowability of audience preferences, exorbitant costs of production, and highly unpredictable success of cultural commodities” (Havens, 2014). The iMac Pro revealed that the professional market Apple believed they knew was, in fact, less monolithic than their lore suggested. ‘Pros’ were less

concerned with hardware aesthetics than Jony Ive's notoriously minimalistic industrial design group. Even the "creative professionals" who served as Apple's primary market in the 1990s were critical of the new machine. They were particularly concerned about its lack of modularity and upgradability. Though they may have been as excited as Apple hoped about the new dark grey exterior, "pros" were more focused on function than form and felt that Apple should be too.

Adopting the term "pro" is reminiscent of other ambiguous descriptors used to delineate different product categories, particularly the phrase "quality" as it refers to television programming. Travis Vogan has written about the rise of so-called quality television and its pervasion of industrial discourses around programming, including cable sports. He argues that ESPN began producing documentaries and other "quality" or "prestige" content in the mid-2000s as part of an effort to differentiate themselves from competitors, like Fox Sports. They were gaining more live event broadcast rights. Around this time, ESPN began referring to themselves as the "Worldwide Leader in Sports," a moniker that traded on their dual strategy of live coverage and "quality" pre-recorded programs such as the award-winning docuseries *30 for 30*. The flexibility of programming these so-called evergreen productions around live events was an added benefit which "to secure ESPN's industrial authority and cultural prominence in sports media while complementing the live content that draws its biggest audiences and largest advertising rates" (Vogan, 2018). ESPN's use of terms like "quality" here and their self-ascribed leadership in television sports is like Apple's initial pitch for the iMac Pro. John Ternus and others repeatedly discussed the "innovation" of housing "workstation-grade" components inside the iMac's slim all-in-one chassis. They even went out of their way to call it "the most powerful Mac ever made," knowing that

their Mac Pro would later upstage it. Like ESPN's assertions of "quality," this hyperbolic language worked to strengthen the overall Apple brand despite their risky maneuver into an uncertain product category.

2.2 *Origins of the Four Quadrants*

To understand the origins of the Four Quadrants strategy, we must revisit the troubles Apple faced during the 1990's when a rapid succession of CEO's and a bloated product line brought the company to the edge of bankruptcy. Beckman & Harris (2007) have conducted a historiographic analysis of Apple which pays particular attention to this era and its impact on the company's strategic goals at the beginning of the 21st century. They draw from interviews and biographies of key Apple executives to reconstruct the events of the period, particularly an autobiography of CEO Gil Amelio who served in the role for a mere 500 days and is best known for overseeing the acquisition of Jobs' upstart firm NEXT. In his book, Amelio explains that "Apple had no clear corporate strategy, no statement of direction that could be used as a basis of deciding which businesses the company should be in and which not, which markets we should be pursuing and which ignoring" (Amelio & Simon, 1998). Beckman & Harris interpret such statements as indications that Apple had moved away from its core values and customer orientation, which emphasized the creation of approachable appliance-like computers over the technological arms race mentality more common at firms like IBM and Compaq. "As a consequence," they explain, "Apple attempted to attack every product niche, and ended up with a bewildering assortment of minutely different models which led to consumer confusion" (Beckman & Harris, 2007).

Apple's attempts to "attack" every product niche during the period fell into two equally confusing endeavors: the Performa series and a short-lived licensing program which allowed third-party hardware vendors to build computers that ran Macintosh software. The so-called

“Mac Clones” manufactured by specialized vendors like Power Computing and Daystar Digital promised customers more customizable specifications and cutting-edge components. The licensing of the Macintosh operating system was hailed as the future of the platform when the program began in early 1995, but by the time Jobs returned in 1997 Mac Clones were thought to be a drain on Apple’s brand value (Beckman & Harris, 2007; Piller, 1995). Longtime Apple columnist Jason Snell remembers the Mac Clone era as “a fundamental misunderstanding of what even confused, beleaguered mid-’90s Apple was... Apple has always been about combining hardware and software together...[which] made Apple so frustrating to investors and business analysts” (Snell, 2020c).

The company’s first-party hardware strategy during this period was equally confusing. Under Michael Spindler (CEO from 1993-96) the company’s emphasis shifted from hardware build quality towards time-to-market, meaning that Apple would issue incremental updates to its various products as quickly as component manufacturers could ship new chips. This resulted in bloated product lines such as the low-end Performa series. At the time of its cancellation included this line included over a dozen distinct products distinguishable only by their product numbers (i.e. Performa 6410 vs. Performa 6412) (Markoff, 1997). When Steve Jobs returned to the company in early 1997, he ordered that both the Clone program and the Performa line be discontinued. At the time these drastic measures were framed in terms of financial austerity due to Apple’s \$1.6 billion in losses over the course of Gil Amelio’s 500 days as CEO (Beckman & Harris, 2007). However, Jobs’ solution to Apple’s strategic missteps wouldn’t become fully apparent until the announcement of the original iMac at Macworld Expo in 1998.

During Jobs' update on the state of Apple at that year's expo he sought to reassure customers, journalists, and shareholders with a series of statistics demonstrating sales growth and financial gains since Amelio stepped down and he was named Interim CEO a year earlier. After attempting to reassure existing stakeholders, Jobs turned to the future and began describing the company's new product strategy. "We went back to business school 101," he told the crowd, "and we said... 'what do our customers want?'" (Jobs, 1998) He then outlined a division between "design and publishing customers" who primarily wanted higher end "pro" products while educational institutions were interested in lower end "consumer" products. Jobs combined this dichotomy with the two primary device classes of the day, desktop and portable, to create what he called a "Four Quadrant" product strategy for Apple. Since the company was still primarily focused on the Macintosh platform and had yet to introduce hybrid devices such as the iPad, Jobs' desktop and portable categories were easily defined and are still widely used in the industry to this day. However, the consumer and pro distinctions were and are less clearly defined both within Apple and across the industry. Jobs and Apple's definitions of each side of this dichotomy were reflected in the company's distribution channels during the period and in the demonstrations of each product family which Jobs gave during his speech.

Apple began selling products directly to consumers via Apple.com in November 1997 but had yet to break ground on their now ubiquitous retail stores. According to Apple's 1998 annual report, the bulk of the company's products were sold via third-parties including "wholesalers, resellers, mass merchants, cataloguers and... education institutions" (Apple, Inc., 1998). While the report does not break down the mix of pro and consumer systems sold through each channel, Jobs' comments seem to reflect internal knowledge of a pro customer base largely built around the creative industries who presumably purchased Mac's wholesale via their employers or from

specialized catalogs and merchants. That educational institutions are called out as a separate sales channel and a key market for consumer products demonstrates an internal strategy in this market focused on delivering lower-performance hardware at lower prices.

Jobs' demonstrations of the new pro laptop product line, called PowerBooks, and his historic unveiling of the iMac consumer desktop also reveal key elements of Apple's product categorization strategy. During the PowerBook segment Jobs invites Phil Schiller, then Vice President of Worldwide Product Marketing, to aid him in conducting side-by-side speed tests of contemporary tasks which would have been computationally intensive for the era on two PowerBooks and an Intel Pentium based Windows laptop from Compaq. After testing an intensive filter application in Adobe Photoshop and the playback of a complicated Flash animation on the PowerBooks, Jobs and Schiller conducted only the latter demonstration on the iMac. Even though both machines contained Apple's latest G3 processor, the company demonstrated through this on-stage "showdown" that while the PowerBook was meant for production, the iMac was built for consumption. This is echoed in the announcement video for the iMac, which displays a litany of popular webpages zooming towards the viewer rather than a host of technical software demos (Jobs, 1998). Thus, from its inception alongside the iMac, the "pro" column in Apple's four quadrant matrix has been differentiated primarily by the hardware's intended use cases rather than any specific technical capabilities. However, specifications (or so-called "speeds and feeds") were emphasized in the marketing of "pro" hardware to greater extent than in Apple's consumer lineup.

2.3 *The Deification of Jobs*

The iMac's massive success solidified Apple's return to profitability and cemented Steve Jobs as the company's permanent CEO until his death in 2011. During the intervening 13 years Jobs

built a reputation as the company's primary spokesman and highly opinionated leader. Since his death the company, its employees, fans and pundits have lavished even more praise on Jobs with some expressing quasi-religious devotion to the late technologist. In their study of Apple fans in China, Liu & Wang (2020) found that they "regard Steve Jobs as a "divine", "godlike figure", "great leader", "spiritual mentor", and see him as an idol because of his "outstanding ability, insight, and charming personality...Apple's devoted fans have developed a sense of awe towards its founder Steve Jobs and see him as the spiritual leader of Apple." Thomas Streeter has argued that this deification extends beyond Apple's fandom into the broader American psyche, which constructs Jobs as a "romantic computer entrepreneur" and an example of capitalism with perceived integrity. In an analysis of discourse surrounding Jobs' death and the invocation of his memory during the 2012 U.S. Presidential Election, Streeter explains:

"The Jobs narrative offers the appealing vision of an idealized, productive, humane capitalism contrasted with the speculative, predatory kind of capitalism, unconnected to useful objects or activities, that appeared in the headlines after 2008. The name of Steve Jobs has become the symbol for the opposite of a Wall Street financial manipulator. Jobs functions, not always but often, as a signifier of good capitalism, of industrial capitalism with moral integrity. And in a world straining awkwardly, perhaps desperately, for ways to reconcile capitalist production with political democracy, that signifier can seem immensely useful and attractive" (Streeter, 2015)

When paired with the productivity focused values system of Ross' No Collar Workers and the status consciousness of Alice Marwick's Silicon Valley social media stars this narrative constructs Jobs as a mythic figure and the object of professional aspiration. His mannerisms become symbolic gestures and his infamously minimal sartorial style becomes a de facto uniform. In

other words, Jobs is constructed by the technology sector, and the American public at large, as a prophetic example of how to succeed in the evolving economy of 21st century capitalism.

Jobs' various public appearances and product launch presentations have been archived and re-uploaded across the internet by Apple fans and technology blogs, many of whom quote from them extensively in contemporary coverage of Apple. Jobs' utterances are frequently used as leverage by fans when arguing against unpopular or unorthodox decisions Apple has made. Sometimes the revival of the CEO's comments is used for comic effect, as when fans trotted out clips of Jobs railing against stylus input devices shortly after the announcement of the Apple Pencil (Statt, 2015). In more contentious periods, factions within the fandom have used Jobs quotes to support their side of disagreements, as was the case with the announcement of the iPad Pro. During this period fans of the Mac and the iPad each employed excerpts from a speech in which Jobs compared the use cases for the iPad and the Mac to cars and trucks respectively (Paczkowski, 2013). This adherence to Jobs' words only further emphasizes his "divinity" within the community. And since the original iMac was his first major product launch after returning to the company, the 1998 MacWorld Expo presentation is frequently cited as one of his most visionary moments. This has led many to dub the speech and the G3 iMac as the moment when Steve Jobs "saved" Apple (Hackett, 2012; Ingraham, 2019; Ravenscroft, 2019; Sharma, 2020; Snell, 2018). It is no wonder then that the strategy behind this revolutionary product, The Four Quadrants, would live on as a key piece of Apple's industrial lore throughout the early 21st century.

2.4 Delays and Drifts in the 2010s

Apple's second-generation Mac Pro, announced in 2013, marked a massive departure from the design of workstation grade computer hardware. The compact device was built around single vertically centered fan and heat sink which provided cooling to a triangular array of component

boards housing the computer's Central Processing Unit (CPU) and two parallel Graphics Processing Units (GPUs). This design was intended to capitalize on the combination of the CPU and one GPU to perform complex computational tasks while the second GPU delivered the graphical output of these tasks to an external display (Apple, Inc., 2013b). Its dual-GPU architecture and use of Intel's high-end Xeon CPUs were the key technical features differentiating it from higher-end configurations of the consumer-focused iMac.

Promotional materials coinciding with the launch of the new line focused on the Mac Pro's capabilities and potential uses in fields such as video editing, music production, visual arts and information technology systems as well as the device's compact form factor (Apple, Inc., 2013b). Press releases accompanying an internal update to the iMac released a month earlier focused on that computer's "fun" design aesthetic (Apple, Inc., 2013a), while the press release for the Trash Can Mac Pro described an "efficient" and "radical" device for higher end users. The "radical" design was a cylinder of semi-reflective black aluminum encasing the computer which earned it a series of derisive nicknames, most prominently "The Trash Can." The polarizing aesthetics of the machine proved to be the least of its problems as thermal issues related to its idiosyncratic design and infrequent updates made it an object of derision amongst users, fans and tech journalists.

In the late 2010s, advances in silicon transistor fabrication led to a significant step forward in the miniaturization of computer processors. As competitors such as Samsung and Taiwan Semiconductor moved to smaller and more efficient 7 and 5 nanometer fabrication systems, Intel struggled to maintain consistent output in their 10 nanometer products (Leswing, 2020). Intel repeatedly delayed the launch of scheduled products and reported numerous shortages in ex-

isting products which were used by desktop and laptop PCs from Apple and its various Windows-based competitors. In 2019, CNBC reported that “Intel shares fell as much as 1.7% [in a single day] after both Dell and HP called out the chipmaker by name in earnings reports...” which showed declines in sales projections (Novet, 2019). Apple also blamed Intel for sales declines in their laptop and desktop product lines, though their statements were more circumspect. Forbes reported on a comment from Tim Cook during a quarterly earnings call, in which he stated that “For our Mac business overall, we faced some processor constraints in the March quarter, leading to a 5 percent revenue decline compared to last year. But we believe that our Mac revenue would have been up compared to last year without those constraints, and don’t believe this challenge will have a significant impact on our Q3 results” (Spence, 2019).

It is no coincidence that these slowdowns coincided with the period of frustration surrounding the stagnation of the Trash Can Mac Pro. Many Apple fans and tech journalists speculated throughout this period that the company’s plans for professional hardware were being hampered by Intel’s production issues. As early as 2016, the hosts of the *Accidental Tech Podcast* tempered their complaints about Apple’s neglect of the Trash Can Mac Pro with remarks about Intel’s inconsistency. “If Apple decides to skip a [processor] generation...they’re setting themselves up for another 18 months with no update,” said Marco Arment, before adding that “it could be longer if there’s any delay on Intel’s side, which again, has been happening with increasing frequency in recent years” (Arment et al., 2016a). Intel’s long-standing strategic advantage as the supplier of choice for high-end computer processors meant that most of the industry watched their releases closely and sought out the latest chips when they became available. Thus, arguments such as Arment’s resurfaced repeatedly as Intel tried and failed to ship subsequent processor generations and Apple left the Mac Pro unmodified. It seemed that Apple’s veil

of secrecy had been pulled back by its reliance on third-party component suppliers whose production timetables were readily available to the public, deepening the blows when the company repeatedly failed to deliver.

In an industry built upon the principle of constant updates, as outlined by Chun, Apple's failure to consistently iterate on their Mac Pro resulted in the product's public perception declining throughout the late 2010's. By the time it was discontinued in 2019, the "Trash Can" was considered an abject failure and an affront to the Pro Mac user community. Despite the ever-improving technical capabilities of Apple's lower-end Macs, the lore of the Four Quadrants dictated that the company should continue to update its most complex and expensive machines at roughly the same pace. Their failure to do so was seen by some within the community as both a strategic failure and an affront to the memory of Steve Jobs and the company they "believed in."

By the time Apple invited industry journalists to the company's corporate headquarters for a "Mac Roundtable" event in 2017, the Trash Can Mac Pro had been on sale for over 1,000 days. These models were sold at the same prices and with the same internal hardware configurations that had launched the product line in 2013. In that same period of time Apple had updated its consumer-focused iMac lines four times including the release of the 5k iMac in 2014, which would serve as the industrial design model for the iMac Pro (Apple, Inc., n.d.). The imbalance in these update schedules caused many Mac fans to make the case that Apple had abandoned its most ardent supporters and forsaken Jobs' Four Quadrant strategy. Some even went as far as arguing that the company in general, and Tim Cook in particular, no longer cared about the Mac due to the runaway success of the iPhone and iPad. Phil Schiller attempted to directly dismiss this line of argument, saying that "We want to make sure everyone understands that not only do we believe in the Mac, but we believe in that product quadrant strategy...we want to excel in

every one of those quadrants” (Panzarino & Dillet, 2017). Fans’ ability to shape this discourse surrounding hardware updates by invoking the Four Quadrants clearly affected Apple’s leadership team. So much so that they broke with the company’s renowned culture of secrecy to invite journalists into a hardware construction workspace to conduct the infamous roundtable interview. The pressure exerted by Apple fans and their ultimate success in extracting an apology from the company at that event will be the subject of the next chapter.

3 BEGGING TO BE FLEECED, FAN INTERVENTIONS

This chapter will establish the state of the professional Mac user community leading up to the mid-2010s and demonstrate the perceived stakes of Apple’s so-called “Mac malaise.” It will then illustrate the transition of Apple’s understanding of the Mac user community and how this came to conflict with the community’s views through a close reading of fan texts created by prominent voices within the Mac community. The analysis will also examine the anxiety within the “Pro” Mac user base about the rise of the “prosumer” category, particularly within the digital creative fields. This anxiety and the heated discourse it sparked on fan programs such as the *Accidental Tech Podcast* will be used to demonstrate how hierarchical definitions of “professionalism” were generated by technology workers during this period. This hierarchy, through which long-time fans attempted to determine who “deserves” a Pro Mac, will be analyzed regarding its tendency to reproduce reductive understandings of the value of labor.

3.1 *Fan Studies Methodology*

To understand the interventions undertaken by Mac users during the period under analysis, this section will adopt methodology from fan studies, including transmedia analysis and online ethnography. The research will demonstrate that these interventions were ultimately successful because fans subverted the containment measures Apple had created in response to more homogeneous fan engagement during a prior era in the company’s history. One of the critical elements of this analysis will be the progression of specific fans from vocal enthusiasts to trusted voices and eventual trade journalists within the technology industry. Apple’s reliance on the evangelism of

these individuals in the early 2000s gave them the platform within the Mac fandom that ultimately enabled the protests surrounding the Mac Pro and iMac Pro during the period under analysis.

In *Convergence Culture*, pioneering fan studies scholar Henry Jenkins adapts Pierre Lévy's concept of "knowledge communities" to explain how individuals within fandom build cultural norms through knowledge sharing. Jenkins argues that this structure fits the fandoms of the social media age better than those of the previous broadcast area, as new technologies have allowed fans to collaborate more efficiently and distribute their works more broadly. A group of enthusiasts is not immediately a fandom or a community, he explains, as these formations require a few foundational elements:

"Knowledge communities form around mutual intellectual interests; their members work together to forge new knowledge often in realms where no traditional expertise exists; the pursuit of and assessment of knowledge is at once communal and adversarial...these same communities can also become protectors of brand integrity and thus critics of the companies that seek to court their allegiance" (Jenkins, 2008)

Jenkins's characterization of knowledge communities as adversarial is crucial to this analysis. The knowledge community surrounding the Macintosh has always existed in direct contrast to the larger and more loosely organized coalition of Windows users. Becoming an active member of the Mac community has always meant positioning oneself in opposition to other computing platforms. Since Apple has been the only company manufacturing computers running Mac OS since Jobs' return, these users become Apple fans by proxy (Snell, 2020b). Apple has evolved from a boutique manufacturer of personal computers to a multinational consumer electronics

brand under Jobs' successor Tim Cook. In the process, members of the brand's knowledge community have frequently questioned whether the new leadership has adhered to the supposed ideals of its previous incarnation.

According to Jenkins, the amateur productions and interventions fans create in response to perceived slights are a form of "collective intelligence." Jenkins argues that capital structures in the west have slowly become more aware of and attuned to the power fans wield through collective intelligence. This awareness and the actions resulting from it are what he terms "affective economics...which seeks to understand the emotional underpinnings of consumer decision-making as a driving force behind viewing and purchasing decisions" (Jenkins, 2008). In Jenkins' framing, the tension between the collective intelligence of fandom and the affective economics of content producers and consumer brands are the driving forces of convergence culture. This tension is visible between Apple and its Mac user base. The company frequently makes sweeping claims about its hardware products. The users/fans immediately test these claims upon the product's release, reporting their results across forums, podcasts, and YouTube videos. In recent years Apple's fans have also clearly demonstrated an awareness of and skepticism towards the company's emphasis on aesthetic innovation. They frequently contrast this with diminishing increases in compute speed and other performance metrics.

In *Exploiting Fandom*, Mel Stanfill argues that the media industry has tilted the power structures of digital media in their favor to both contain fan interaction and leverage fan labor as a form of cultural capital. "As industry invites fans to participate," she argues, "it attempts to recruit them into a system of management—a selective and specific system passing itself off as neutral and universal" (Stanfill, 2019). This system contains fans by guiding them to interact

through approved channels, often sharing pre-approved content, to signal their emotional investment through engagement, recorded and interpreted as demographic data to target future advertising. Stanfill calls this process the “domestication model” of fandom, which “is a bid to accustom fans to eating out of industry’s hand rather than finding their own food.” Those fans whose actions aren’t contained through the domestication model are instead encouraged to use their labor in service of the industry’s promotional efforts. Stanfill explains:

“...promotional labor creates value by distributing industry-made promotional content, which capitalizes on fans’ access to the means of media distribution for industry’s benefit... Some fans do this work to launch or further careers as professional, paid workers—a trajectory normalized in representations of fans and industry statements about fan production... Thus, career trajectories toward becoming professional media workers do not necessarily mitigate the extraction of unpaid labor from other obligations (including paid labor) to do the often-intensive work of production.”

This form of aspirational promotional labor is prevalent in the Macintosh user community. The rise of podcasting and blogging, which coincided with Jobs’ return and Apple’s early 2000s renaissance, led to a groundswell of fan publications that operate at the periphery of the technology industry and attempt to curry influence and favor by incessantly reporting on rumors and theories about Apple’s upcoming releases. All this labor ends up serving Apple’s interests, creating a tremendous amount of buzz around each product announcement, including minor updates.

This thesis will adopt a segmented approach to analyzing such fan behavior, adapted from Collins et al. (2020), wherein the authors propose a “folksonomy” of fans. This flexible taxonomy categorizes fans using specific cultural language within fandom spaces through which fans

and brands identify one another. The folksonomy measures activity within three fanish values/behaviors: knowledge of the brand, social engagement surrounding the brand, and passion for the brand's values/products. Three of the categories outlined by Collins et al. are especially common in the Macintosh user community: the Alpha, the Maven and the Evangelist. As previously discussed, the Brand Evangelist category of fan engagement is codified and encouraged by Apple itself. According to Collins et al. (2020):

“The evangelist tries to get others involved in the product as a specific goal... The “Evangelist” has a religious connotation that is integral to its meaning...Apple wanted to call their fervent fans evangelists, and the Apple evangelists wanted to be called that. As the concept spread more widely, religiosity became an essential part of what an evangelist is in a non-religious context.”

Apple encouraged its fans to identify as evangelists because it enabled a “proselytizing” behavior. Macintosh users extolled the virtues of their chosen operating system over the alternatives, especially Microsoft Windows. However, as Apple's product offerings diversified (with the iPod, iPhone, and iPad), the company had less use for this sort of engagement. The proliferation of cheaper portable devices based on Apple's new iOS platform and the company's increased focus on lifestyle marketing targeted at broadly influential Alphas (i.e., social media influencers) resulted in many Mac fans adopting the stance of the Maven. According to the folksonomy mentioned above, a Maven:

“Sees themselves as an expert in a particular set of matters.... Mavens' knowledge is in the context of other products in the same category...a Maven knows why the specs are better for product A versus product B. The Maven's position is a rational one: he

or she supports a product because they are knowledgeable about most products, and this one wins out for one reason or another” (Collins et al., 2020)

After years of defending Apple as an underdog against the perceived onslaught of monopolistic competition from Microsoft, these fans turned their energy towards defending the Mac as the heart and soul of Apple. During the controversy surrounding the Mac Pro and iMac Pro, such mavens frequently deployed arguments about productivity and “real work” as reasons that Apple should continue investing in the legacy of the Macintosh. In other words, the very evangelism the company had encouraged in the late 1990s and early 2000s encouraged and inspired a method of dissent among “Pro” Mac users in the 2010s.

Kristina Busse has outlined specific ethical considerations for qualitative research of online fandoms, such as the analysis that follows. Her chapter on the subject outlines two primary concerns: “One is the question whether online evidence ought to be viewed as a textual document or as an utterance by the person who wrote it; the other is the question whether a given online space, especially on social media sites, is public or private” (Busse, 2018). In addressing Busse’s first question, this thesis will attempt to separate textual documents, such as blog posts, from extemporaneous utterances, such as those given on podcasts and YouTube videos. This separation is commonly remarked upon by fan creators within the Apple fandom as topics from blog posts are frequently expanded and subjected to further analysis on the authors’ podcasts (Hurley & Snell, 2018).

Addressing Busse’s concern about the privacy of fandom spaces, this thesis focuses on fan content released to blogs, podcasts, and YouTube channels branded as and geared toward commentary about Apple. Many of the creators behind these outlets are published technology journalists or amateurs aspiring to create independent trade publications. This thesis distinguishes

those aspirants from their more established industrial counterparts by separating fans who purchase goods from Apple and reviewers who receive free products to review on a trial basis. The distribution of these so-called “review units” is considered a status symbol within the fandom and marks a rite of passage from fan status to semi-professional trade journalism (Bonnington, 2017). As such, sources cited as fans within this thesis were not receiving review units during the Mac Pro/iMac Pro controversy (2017-2019) but may have subsequently ascended into the hallowed spreadsheets of Apple’s PR list.

3.2 *Evangelists, Alphas & Mavens*

In September 1983, Guy Kawasaki was hired as the Chief Software Evangelist at Apple. His job description directed him to meet with third-party software developers and convince them to bring their applications to the nascent Macintosh platform ahead of its global launch in 1984 (Kawasaki, 1990). He departed the company in 1987 to start his own Mac-based software venture but returned in 1995 as an Apple Fellow tasked with reinvigorating the company’s fanbase. Over the course of his career, Kawasaki has written multiple books about his stints at Apple which range from management handbooks to personal memoirs. The earliest of these, The Macintosh Way, was published in 1990 and includes an early definition of Evangelism as it was used inside Apple. “Evangelism is sales done right,” he argues, “It is the sharing of your dream with the marketplace and the making of history with your customer... When you evangelize people, they get infected, carry the torch for you, share your heartbeat, and defend you against your enemies. When you look in their eyes, you see your logo” (Kawasaki, 1990). Kawasaki’s definition is adapted by Collins et al. (2020) in their folksonomy of fandom groups where particular emphasis is placed upon the Evangelist’s emotional connection to the brand and their oppositional positioning towards competitors.

The emotional connection of Mac users to Apple, and their hatred for the Microsoft/Intel (aka Wintel) consortium of the 1980s and 90s has been documented in numerous academic and journalistic publications. However, the most pertinent example to this analysis is the discourse surrounding high-end or “Pro” Macintosh systems during the era. During the Mac Clone era, Apple’s licensed hardware vendors were especially adamant about their technical superiority over Wintel and advocated for quasi-militant devotion from the Macintosh faithful. A promotional stunt staged by Mac Clone manufacturer Power Computing at the 1996 MacWorld Expo rallied Apple fans in military fatigues to ride around the convention center on Humvees handing out fliers displaying the slogan “Let’s Kick Intel’s Ass! We’re fighting back for Mac!” (Snell, 2020c).



Figure 3: Power Computing Flyer from MacWorld Expo 1996

(Snell, 2020c)

Spurred on by Apple’s minority share in the personal computer market during this period, Mac fans frequently positioned themselves as a resistance movement facing down a monopolistic

force embodied by Wintel. Their emotional calls to arms are clear attempts at evangelizing on behalf of Apple and the Macintosh platform. As previously established, Apple's revenues were falling precipitously during this period, and yet the company had not promoted the Mac this aggressively since the 1980s. Thus, fans and third-party vendors advocated for the Mac in a manner which presented the purchase of such computers as a revolutionary act. "The fundamental notion" behind such rhetoric, according to Collins et al., "is that the evangelist receives an emotional award for this conversion" of an Intel user to membership in the so-called "Cult of Mac" (Collins et al., 2020).

The classification of Mac fans as members of a technocratic "cult" emerged in the late 1980s and has become a term of both prideful boasting and mocking derision during various points in Apple's history. Kawasaki identifies the Cult in his 1990 book as "a small part of emerging markets...[made up of] hardcore power users and aficionados, plus a small percentage of luminaries, analysts, press and dealers" (Kawasaki, 1990).



Figure 4: Cult of Mac Diagram

(Kawasaki, 1990)

Fifteen years later, during the iMac fueled renaissance following the return of Steve Jobs, Belk & Tumbat initiated an academic discourse around the Cult of Mac, arguing that its adherents observed practices more in line with a religious tradition than a sports fandom. They explain that

“This religion is based on an origin myth for Apple Computer, heroic and savior legends surrounding its co-founder and current CEO Steve Jobs the devout faith of its follower congregation, their belief in the righteousness of the Macintosh, the existence of one or more Satanic opponents, Mac believers proselytizing and converting non-believers, and the hope among cult members that salvation can be achieved by transcending corporate capitalism...” (Belk & Tumbat, 2005)

Their emphasis on the emotional connection of “Cult” members to the Apple brand clearly aligns these individuals with the Evangelist model outlined by Kawasaki and Collins et al. The framing of loyalty to and support of the Macintosh as both an opposition to the “satanic” forces of Wintel and a potentially transcendent form of capitalist engagement is key. By supporting the Mac, they argue, fans considered themselves to be *literally* buying into a future of computing which more closely aligned with libertarian and countercultural values that ran counter to the corporatized interests of Apple’s primary competitors. This clearly appealed to adherents of the California Ideology, as outlined by Marwick, wherein “the adoption of computer technologies brings positive social consequence” (Marwick, 2013).

The Mac/Wintel rivalry became less central to the belief system of the Cult of Mac during the late 2000s when Apple announced that it would transition its entire Macintosh product line to Intel processors. The transition signaled both the failure of Apple’s reliance on the outmoded PowerPC processor standard and the end of an era of Mac specificity. In fact, shortly af-

ter the launch of Intel-based Macs the company began bundling all off their computers with drivers enabling them to run Microsoft Windows (Apple, Inc., 2006). Apple's launch of the iPhone in 2007 has overshadowed the rancor of this transition in many histories of the era, and rightly so, as it launched Apple's earning to stratospheric levels and made it the most valuable company on Earth. However, the Intel transition also marked the beginning of an era of wavering discomfort among Mac users which culminated in the iMac Pro controversy. Some of these fans went so far as to argue that less frequent updates and declining sales relative to the iPhone meant that Apple and Tim Cook did not care about the Mac platform. These complaints, according to Matt Hills' theory of "Always on Fandom," become an articulation of the individual fan's self-identity world and the external system of communally shared constructions which makes up their fandom. The concerns and complaints outlined below articulated an identity for "Pro" Mac users in an increasingly iOS focused technology landscape and initiated a chain of events which led to the Mac Roundtable and the announcement of the 2019 Mac Pro.

Earlier in the 2000s however, with the launch of the iPod and later the iPhone, Apple began to shift its emphasis away from the Mac and towards portable products. These new product launches were accompanied by an emphasis on "Lifestyle Marketing," which Jung & Merlin (2003) define as "a product or service that provides consumers with an emotional attachment to an identifiable lifestyle — the rugged outdoorsman, the posh executive or an urban hipster, for example." Advertising campaigns from the period emphasized these aspirational lifestyles, such as a TV spot depicting models accessorizing their iPod Shuffle with various outfits signifying youth subcultures (Cheng, 2016). And then there was the ubiquitous silhouette campaign which featured the black outlines of fashionably dressed dancers with white iPod earbuds in their ears against brightly colored backdrops.



Figure 5: Stills from iPod Shuffle TV Spot

(Cheng, 2016)

The most literal and visible representations Apple created for its intended audience during this era was the portrayal of a “Mac” by actor Justin Long in the “Get A Mac” campaign. In his analysis of the campaign Randal Livingstone finds that Apple “defines for its audience the dichotomy between the casual, confident, creative Mac user and the formal, frustrated, fun-deprived PC user” (Livingstone, 2011b).



Figure 6: Still from the “Get A Mac” Campaign

Note: John Hodgman (left) portrayed the “PC” to Justin Long’s (right) “Mac” in the American TV spots for the “Get a Mac” campaign (Livingstone, 2011a).

Livingstone is particularly interested in the implied classes of PC and Mac users that are present within this campaign. He places “Mac” in the upper class, because Long’s depiction of “a self-directed, flexible lifestyle is commonly riddled with risk, instability, and hyper individuality, characteristics of post industrialism that are often left out of the ‘digital’” (Livingstone, 2011b). This aspirational class narrative reinforces Marwick’s findings about the conspicuous consumption of Apple hardware by social media industry workers and Ross’s depiction of the No-Collar Worker whose precarity is papered over with aspiration and so-called “hustle.” The ideal Mac

user then, according to Apple, is an aspirational Alpha. As Collins et al. (2020) explain “The currency of the alpha is popularity. Why the Alpha attaches to one brand or another is immaterial; the attachment could be based on passion, or reason or both...what is essential is their role as an opinion leader.”

In his chapter on “Audiencing,” John Fiske (1992) argues that “a text is no more nor no less an effect of the audience than is the audience of the text.” In his systemic view of reception studies, producers design their texts around existing social categories which are in turn re-formed and reinforced by the consumption of said text. A social category within this system, he explains is “formed and dissolved more fluidly according to [their] textual conditions. It is identified by what its members do rather than by what they are...” (Fiske, 1992). In this sense, Apple’s audience of “Pro” Mac users were largely defined by their purchasing of “Pro” hardware rather than any identifiably “professional” title or job description they may have possessed. The company reinforced this by broadening the use cases presented for these products during demonstrations, while at the same time targeting industries where they had a strong sales record (i.e., the creative professions). This points to Stanfill’s argument in *Exploiting Fandom*, that “As industry invites fans to participate, it attempts to recruit them into a system of management—a selective and specific system passing itself off as neutral and universal” (Stanfill, 2019). When Tim Cook stood on stage at press events and told fans that “We can’t wait to see what you do with it,” he also implicitly told them that the product(s) Apple shipped were fully formed and feature complete. The pro user was invited to create using these tools, but had no input on the creation, maintenance or updating of the tool itself.

This framing functioned well for Apple in the 2000’s and early 2010’s, but as Intel’s supply chain issues began constraining their ability to update higher end Mac systems such as the

Mac Pro fans began to operate outside of the company's preferred construction. With the shift to Intel, the Mac became largely indistinguishable from its Windows-based competitors in terms of internal components. Apple was forced to compete largely on the fronts of industrial design, operating system functionality and its nascent suite of cross-platform software operating on both the Mac and iOS (the operating system which ran on iPhones and iPads). Without the vitriolic vendetta to wage against Wintel, many longtime Mac users moved across the fan folksonomy from the role of the Evangelist into the position of the Maven. To reiterate, a Maven is "someone who sees themselves as an expert in a particular set of matters [where] A geek knows all the specs of a product; a Maven knows why the specs are better for product A versus product B" (Collins et al., 2020). Losing the evangelistic passion of defending the Mac and Apple against Intel, particularly after Apple became the largest company in the world by market cap in 2018 (Salinas, 2018), fundamentally changed the Mac fandom and Apple's expectations of them. However, as will be demonstrated below, when Apple began to delay products and drift away from its Four Quadrants strategy that lingering evangelistic sentiment morphed into an organized outrage against the company.

3.3 *Accidental Tech Podcast & The Mac Malaise*

Initially launched as a car enthusiast program in 2013, the *Accidental Tech Podcast* emerged organically, as its name suggests, from conversations between co-hosts and professional software developers Marco Arment, Casey Liss and John Siracusa. Of the three, only Siracusa had any experience as a technology analyst, having authored a column for the technology blog *Ars Technica* in the 2000's and 2010's (Wells, 2019). Arment had previously served as the Chief Technical Officer for the micro-blogging site Tumblr while Liss and Siracusa had worked in enterprise software development (Arment, n.d.; Liss, n.d.; Wells, 2019). Despite their professional

roles within adjacent industries, the trio approached their discussions of Apple from the perspective of fannish mavens. They frequently dissected press releases, keynote presentations and leaked rumors with the same fervor as members of forum sites such as MacRumors. Other podcasts lauded their expertise when it came to analyzing the technical minutia of new Mac hardware and Intel processor revisions. During the first six years of the podcast's run the company treated it like any other fan publication. Executives occasionally made coy references to the trio in their presentations and Apple employees funneled rumors to the show to fuel conversation. However, as the "Trash Can" Mac Pro began to show its age the hosts took on a much more emotional and critical approach to Apple which ultimately brought them more notoriety and professional recognition from the community and the company.

One of the earliest discussions to feature an emotional outburst on behalf Mac users, #179: *Free to Play Dogs*, was published in July 2016 shortly after the MacRumors.com Buyer's Guide was updated to show that the Mac Pro had not been updated in over 1,000 days. Marco Arment was particularly outraged by this lack of action on Apple's part, saying that:

"When they choose to just say, 'You know, it's not worth updating to this.' That is really a position of hubris and of arrogance and neglect of these products... That is infuriating. And it really shows a level of disdain for your customers. It takes a certain degree of shamelessness, and of arrogance and hubris, to be still selling the same Mac Pro today, if you walk into the Apple Store...you could order in December of 2013"
(Arment et al., 2016a).

Arment's invocation of hubris, arrogance, and disdain on the part of Apple along with his admission of emotional agitation at the situation demonstrates his position within the fandom. Despite the company's attempts at nurturing a fanbase of Alphas and Mavens, a high-profile fan and core

member of the Cult of Mac, associated with both a major social networking service and a popular podcast, was openly aiming his evangelistic ire at the mothership in Cupertino.

Arment went on to cite recent interviews and press videos in which Apple CEO Tim Cook was shown to conduct his daily work on an iPad Pro. "...It looks like Tim Cook just doesn't like the Mac very much," Arment said, adding "I hope that's not the reason for all this. And I hope that's not true. But that's how it looks. It looks like Tim Cook doesn't care about the Mac" (Arment et al., 2016a). This projection of apathy onto Tim Cook played into the common refrain that Apple had suffered under his leadership and that he had failed to sufficiently devote himself to the cult of Steve Jobs. Arment evoked Jobs on various podcast episodes during this period as a means of criticizing Cook's Apple and their perceived malaise around the Mac. In one episode he noted that "Steve Jobs loved computers. And even when new stuff [such as iPads and iPhones] came out, he loved computers...But it is very, very clear that the Mac is not being given the priority and resources that it needs to move forward" (Arment et al., 2016c). Rather than admit, as his co-hosts reluctantly managed to, that the Macintosh platform might simply be losing its popularity and market share to Apple's portable devices, Arment invoked Steve Jobs' dedication to the platform as a symbolic counterexample to the apathetic neglect he perceived under Tim Cook.

Later that same year, Arment appealed to Apple and its employees through a blog post entitled "A World Without the Mac Pro," which he opened as follows: "It's looking increasingly likely that there will never be another Mac Pro. Here's why that would be a shame..." (Arment, 2016). From there he lays out a case for the continuation of the product line that covers everything from technical specifications of competing desktop computers to flattery of Apple's hard-

ware design team and the stubborn insistence of Mac loyalists to stick to the platform. In the latter section, he writes that “We don’t want to leave the Mac. We came here, built here, and stayed here all of this time because Macs are truly *awesome* computers, and macOS is the best operating system in the world” (Arment, 2016). His insistence that the Mac and its operating system are fundamentally superior to the alternatives presented by competitors echoes the evangelism common among Mac fans during the 1990s. However, in this case it is tinged with a sense of desperation. Arment is practically begging Apple to justify his decades long faith in their product offerings. “If we’re forced to move to something else,” he writes, “it’ll be painfully, inescapably, perpetually worse... don’t abandon those of us who truly want or need the best computers in the world, because if they’re not Macs, they’re not good enough” (Arment, 2016).

Arment’s emotional appeals were echoed by his *ATP* co-host John Siracusa, who throughout this period was desperately clinging to a 2009 Mac Pro in an act of resistance against the company’s controversial “Trash Can” re-design. Siracusa’s insistence on maintaining a computer which was approaching a decade of continuous daily use brought on considerable mockery from fellow fans and podcasters (Gruber, 2016), but his appeals were in some ways even more evangelistic than those made by his colleagues. When Apple quietly discontinued the standalone display frequently paired with the Mac Pro, Siracusa experienced what he called a “dark night of the soul,” in which he lay awake reckoning with the possible end of Apple’s investment in the desktop PC market. He outlined the cause of his distress on the *Accidental Tech Podcast*, saying

“It crushed me to the point where I was immediately trying to consider if they come out with another Mac Pro, I don't think I'm gonna buy one. I should just get an iMac I cannot live in a world where I gonna wait until June next year to get a new Mac Pro.

And then connect an ugly third party...monitor to it. I don't know if I can do it... this monitor thing has totally destroyed me” (Arment et al., 2016b)

For a dedicated Apple fan and sometime columnist to lay awake and emotionally reckon with abandoning his beloved computer platform speaks to the melodrama experienced by Mac fans during this period. Siracusa went on to describe the phenomenon as “Mac Malaise,” saying that “every publication feels like they need to have a ‘Mac Malaise’ article where they talk about either cranky Mac users or Apple failing those Mac users, or both” (Arment et al., 2016c). Articles and podcasts from around this time echoed Siracusa’s hopelessness, with headlines such as “Professional Mac Users' Complaints List Grows After 'Disappointing' Apple Event” (Hardwick, 2016) and “Why 2016 is such a terrible year for the Mac” (Snell, 2016). Such malaise around the Mac was clearly not the response Apple had hoped for as they rolled out significant updates to higher selling product lines like the iPhone and iPad during the Fall of 2016. Their lack of new products and a coherent message on the Mac in general, and the Mac Pro in particular, gave fans and industry pundits the space to define the narrative and craft a discourse that was dominated by negativity.

The hosts of the *Accidental Tech Podcast* weren’t just complaining about their current circumstances though. They spent months debating potential paths forward for the Mac Pro. These debates were contentious largely because they revolved around questions about the value of labor and which professions could be categorically grouped together and considered worthy of a “Pro” computer. According to Arment, “you can't whip out pro use cases selectively to justify certain things which Apple does,” he advocated for a “truly Pro” computer which would be delineated from the consumer Mac models by its intended audience *and* its technical specifications (Arment et al., 2016b). Such conversations frequently devolved into judgmental evaluations of

common professions in the Mac fandom such as software development, video editing and photography. These evaluations were then appended with the opinions of the various hosts as to whether they considered these forms of labor “professional” and if they believed Apple felt the same way. At one point, Casey Liss brought these terms into stark relief, stating that “I am by at least some definition. A professional. I'm not a photographer, that's a different kind of professional. I'm not an artist, that's a different kind of professional, but I am a professional, no question” (Arment et al., 2016a).

Liss argued that Apple “...can define professionals as professional podcasters, as professional project managers, as CMO's, whatever...” (Arment et al., 2016b). For him, the only requirement was that a Mac Pro serve an audience with more computationally taxing workloads than those of the “consumer”. He explained this by comparing his work as a software developer to the creative professions:

“I write code for a living. That's what I do. By most definitions, that is a Pro-level profession, in whatever definition of “Pro” you so choose...suppose I'm a professional photographer, and I want to have this machine in the field that can do, I don't know, whatever professional photographer people do, like plug in SD cards and, do computationally difficult things, or, you know, have a bazillion pictures open at once, which somehow necessitates 32 gigs of RAM...if this isn't for you? Well, there's no real Mac Pro option. The iMac is below me because I'm a professional” (Arment et al., 2016b).

The last sentence of Liss’ statement is particularly important. By positioning the Mac Pro as “above” the consumer-focused iMac he was reinforcing the Four Quadrants theory espoused by Steve Jobs 17 years earlier. It is also notable that he considers his own work to be “by most definitions a pro-level profession.” In his construction, the “Pro” in “Mac Pro” is as much about the

role it plays in the “Pro-ness” of supposedly professional labor as it is an assessment of computational power. The construction of professionalism as a hierarchical dichotomy, positioning some users above others based solely on the complexity of their hardware needs, echoes Marwick’s findings about status in Silicon Valley and Ross’ ethnographic research at No Collar workplaces in the 2000s. In these settings, and within the Apple fandom, technically complex work is valued over labor that is more focused on interpersonal, or soft, skills. By owning a Mac Pro then, a user is positioning themselves at the top of this status hierarchy, implicitly asserting that their labor is more complex and thus more valuable.

John Siracusa and Marco Arment were particularly concerned that Apple might be abandoning these “high end” users in favor of the admittedly larger market segment which purchased their consumer products. They recommended an informal survey of other “professionals” across affected industries and how such anecdotal data might aid in their understanding of Apple’s market share and impact on labor. Siracusa explained that this survey could be conducted simply by evaluating one’s peers:

“If you find yourself saying, “Look, everybody who's editing videos is doing it on a big, powerful personal computer. Personal computers can't go away, I'm a video editor...” Then [it's easy to] make the leap to “therefore Apple needs to make a new Mac Pro,” [rather than] ... “Does Apple need to make Mac Pro, or do you just need to switch to Windows and be sad?” Maybe Apple staying in that business is just some sentimental thing that you care about” (Arment et al., 2016a)

Siracusa even admitted that he may be approaching the issue with too much sentimentality, stating that rather than leave its highest end computers stagnant for years, “we would all be much

happier if Apple got out of it and stop making the line of computers entirely...and gave that business to Microsoft or some company that's actually interested in pursuing it” (Arment et al., 2016a). In a fan culture known for its evangelistic passion, this admission might have previously been considered a mortal sin. However, it is a testament to the overwhelming nature of “Mac Malaise” that Siracusa’s concession to Microsoft went largely unremarked upon and was in fact echoed in industry columnists’ praise of Microsoft’s Surface product line during this period.

None of the hosts of *Accidental Tech Podcast* were willing to fully give up on a future Mac Pro though. Instead, they argued for Apple to reboot the product line with a machine that more closely resembled the 2006-2012 “cheese grater” design. This computer, shaped more like a traditional PC tower, allowed the user to easily swap out components after purchase thus extending the life of the machine by adding newer and faster parts. Such arguments were not new in the Apple fanbase or the technology community at large during this period. Advocates for consumers’ so-called “Right to Repair” had been pushing against Apple for their penchant towards sealing up their products in a manner that made component upgrades next to impossible. Marco Arment argued that any future Mac Pro would “have to be upgradeable aftermarket, period...And if for some reason, you really insist on making them not upgradable, you have to be updating them on a regular basis, every nine to 12 months...because that's what's competitive” (Arment et al., 2016a). As Chun (2016) has noted, new media are “new to the extent that they are updated...Things no longer updated are things no longer used, useable, or cared for.” Mac fans felt justifiably frustrated by the lack of updates to the Mac Pro, particularly after Apple foreclosed on any possibility of aftermarket updates undertaken by the consumer. Despite all these concerns and frustrations, fans eagerly awaited a new Mac Pro.

John Siracusa, with his 12-year-old “Cheese Grater” Mac Pro, became a symbol of the increasingly impatient “Pro” user demanding an update from Apple. He closed out a particularly contentious segment on the topic as follows:

“It's frustrating when at any price. You can't throw your money at Apple and say, “Just give me as much RAM as will physically fit in the machine...I don't care how much it costs” and they're like “No, we're not interested in selling you that.” And you should be, because it's a good way to make money off suckers like us! ...I wish they would have enough interest to say, “Can we fleece those people?” **Because at this point, like, I'm begging to be fleeced...**” (Arment et al., 2016b)

Across the Apple fandom, similar pleas were made throughout 2015 and 2016 with increasing urgency as Intel continued to fall behind on its manufacturing timelines and the “days since last update” counter on the MacRumors buyers guide kept climbing. Apple released an update to the MacBook Pro in the fall of 2016 which only stoked the outrage surrounding their desktop products. More podcast segments and blog posts accumulated during late 2016 documenting the Mac Malaise. This culminated in a column by Apple analyst Mark Gurman in *Bloomberg* entitled “How Apple Alienated Mac Loyalists,” in which he wrote that “To die-hard fans, Apple Inc.'s Macintosh sometimes seems like an afterthought these days” (Gurman, 2017). The negative PR generated by the Mac Pro had moved from the fandom to the financial papers, and Apple would have to begin taking it seriously or start facing questions from shareholders.

Fans such as the co-hosts of the *Accidental Tech Podcast* leveraged their emotional connection to the Apple Brand to advocate angrily on behalf of a product line they felt was being neglected. The success of their campaign can be ascribed to Apple's active encouragement of such emotional connection through its formal and informal evangelism campaigns throughout the

1990s. Apple attempted to contain this manner of fan engagement during its shift towards an audience of more casual computer users interested in lifestyle products such as the iPod in the 2000s. However, these fans resurfaced when the momentum the company had built up during the Mac's Intel transition ground to a halt. The community of fan produced podcasts and blogs which had been the backbone of the Mac community for decades quickly became an echo chamber for the growing Mac Malaise. These angry evangelists were still ready and willing to wage war against Windows but felt that their corporate leaders had left them behind in favor of a more status-focused alpha consumer. When the bad publicity surrounding this debate bubbled up above the surface of fandom and began to enter the business press the company had to make an announcement to reassure both its "Pro" users and its shareholders (Gurman, 2017). Thus, in 2017 they convened the Mac Roundtable and uncharacteristically pre-announced two new pieces of high-end hardware.

4 SERIOUSLY BAD-ASS; INDUSTRIAL ANALYSIS OF THE MAC BOOK PRO

This section will analyze a rare moment of publicly acknowledged shifts within Apple's production culture surrounding the announcement and subsequent discontinuation of their iMac Pro line of desktop computers. Released in 2017, the all-in-one iMac Pro was almost immediately upstaged by a redesigned modular tower-style Mac Pro, which was announced around the same time but released in 2019. In early 2021, Apple discontinued the iMac Pro and sold off their remaining inventory ahead of further revisions to the consumer iMac and the Mac Pro (Simon, 2021). Apple's internal culture of secrecy combined with a misunderstanding of the "pro" customer's expectations resulted in the iMac Pro's immediate overshadowing and early discontinuation. The section will argue that this resulted from a misjudgment of the impact of industrial lore on fandom by executive leadership within Apple's product design and marketing teams. Apple's fans expected the company to follow the Four Quadrant product model designed by the late Steve Jobs. However, the company's focus on lifestyle marketing and pursuit of aspirational prosumers led them to develop and release a product based upon an over-simplified understanding of the professional desktop workstation market segment. By the time Apple executives realized the error in their thinking, it was entirely too late. They were forced to announce plans for a future Mac Pro two months before their public reveal of the iMac Pro, thus dooming the device to be permanently overshadowed by an even more "pro" model. This section will analyze the launch of both products, including their initial press materials and sanctioned reviews, to establish their intended audiences. The launch of the 2019 Mac Pro will then be presented as Apple's mea culpa to professional users and a return to a definition of "professional" that was more familiar to the company's most ardent fans and consumers from a prior era of desktop computing.

4.1 *The iMac Pro*

One of the most influential web pages among fans and devoted users of Apple technology products is the MacRumors “Buyer’s Guide.” This page displays all the company’s current product offerings alongside traffic-light style buttons indicating whether they are considered a good value for their purchase price at any given time. For most of 2016, the Mac section of this webpage was the center of a growing controversy among Apple fans and customers. On an episode of the *Accidental Tech Podcast*, tech columnist and software developer John Siracusa posited that it was “exactly the opposite message that Apple wants anywhere, all of its products arrayed in a big line with red things that say ‘don’t buy’” (Arment et al., 2016a). Siracusa and his colleagues were growing increasingly impatient with Apple’s apparent lack of concern for their high-end desktop, the black cylindrical tower known as the Mac Pro, which was approaching 1,000 days since its last hardware revision. This machine, derisively nicknamed “the trash can,” was still selling for nearly \$3,000 despite containing three-year-old components.

As critical takes on the long-dormant Mac Pro amassed from podcast hosts, journalists, and high-profile developers, Apple realized that they would need to address the controversy. However, this negative press accumulated mere months before the company planned to launch a new high-end all-in-one desktop, the iMac Pro, at their Worldwide Developer Conference in June 2017. It was presumably too late in the product’s development for any significant changes. To avoid stoking the growing outrage by replacing the Mac Pro with this new iMac Pro, as they had initially intended, Apple was forced to pre-announce both the new all-in-one and a mysterious “modular” pro tower during an unprecedented press event in April 2017. This so-called “roundtable event” was held in a Mac testing facility inside its notoriously locked-down corporate headquarters. A handful of prominent tech journalists were seated at a table with a group of

Apple executives who effectively pre-announced both the all-in-one iMac Pro and a mythical “modular” pro desktop machine, to be released “after this year” (Panzarino & Dillet, 2017). The event sparked a whole new wave of speculation among fans and pundits, wherein confused observers wondered about the intended customers for the two “Pro” machines. When Apple formally revealed the iMac Pro in June, some journalists went as far as calling the device “a trap” (Brownlee, 2017a) based on the company’s pre-mature revelation existence of a modular Mac Pro replacement that would presumably outperform this new all-in-one desktop computer.

Following this metaphor of the iMac Pro as a “trap,” it is instructive to analyze the discourse surrounding the device to determine which customers were being baited. During the roundtable event, Apple’s SVP of Worldwide Marketing, Phil Schiller, admitted that “there isn’t one prototypical pro customer.” The iMac Pro targeted a specific subset of knowledge workers with heavier computational demands than the typical iMac could handle. Apple’s controversial decision to eschew a standard professional-grade desktop computer’s modularity for a familiar all-in-one design signals that the company was attempting to redefine its highest-end market segment. This redefinition was doomed to fail, as the company admitted by pre-announcing the “modular” Mac Pro during the 2017 roundtable and eventually discontinuing the iMac Pro, without a single hardware revision, in the spring of 2021. I argue that the iMac Pro attempts to communicate professionalism as an aesthetic through its familiar all-in-one form factor and an exclusive black and grey color scheme. This aesthetic addressed a segment of the desktop computer market interested in a high-end desktop computer that operated as a status symbol and an aesthetic object rather than a purely practical device. This analysis relies upon official statements from Apple executives, marketing materials released alongside the iMac Pro, and a unique PR

strategy that saw Apple focusing most of its energy on creative professionals, especially YouTubers.

As previously mentioned, Apple confirmed the iMac Pro existence during their April 2017 roundtable event, just two months before it was formally introduced at the Worldwide Developer Conference and eight months before it finally went on sale in December 2017. This sort of preemptive announcement and months-long delay in shipping is extremely rare for Apple, renowned for their secrecy regarding new product launches. Thus, it is instructive to examine the evolution of the iMac Pro discourse in three phases: the initial confirmation, the official announcement, and the final release. Each phase illustrates a different aspect of Apple's ideal "pro" consumer and the corresponding errors in these assumptions, which resulted in the iMac Pro being discontinued as an anomalous one-off release.

The first phase of the discourse, which emerged from the roundtable event, positioned the iMac Pro as an exciting new release for those 'pros' who were already using consumer iMacs. Towards the beginning of the roundtable event, Phil Schiller provided some unsourced statistics about Mac hardware sales, including that the ratio of the notebook to desktop sales was 80/20 and that about 15% of all Mac customers "use what you'd categorize as a professional application on a weekly or even multiple-times-a-week basis" (Panzarino & Dillet, 2017). According to Schiller, these users of unspecified "professional applications" are categorical 'pro' consumers. Among them, "Notebooks are by far and away our most popular systems. Second on the list is iMacs...Mac Pro is actually a small percentage of our CPUs — just a single-digit percent" (Panzarino & Dillet, 2017). Apple felt that the successful iMac form factor could be adapted to suit a large cross-section of the pro-market, as Craig Federighi argued later in the event:

“And now you look at today’s 5k iMac... it’s incredibly powerful and a huge fraction of what would’ve traditionally required the Mac Pros of old and are being well addressed by iMac — whether it’s audio editing, video editing, graphics, arts, and so forth. But there’s still even further we can take iMac as a high performance, pro system, and we think that form factor can address even more of the pro-market...so many of our customers were moving to iMac that we saw a path to address many, many more of those that were finding themselves limited by Mac Pro through a next-generation iMac. And really put a lot of our energy behind that.” (Panzarino & Dillet, 2017)

Federighi seems to be arguing that the iMac’s second place ranking in terms of sales is an endorsement of the product’s form factor rather than an indictment of the infrequently updated Mac Pro. He briefly mentioned that Pros were “moving to iMac,” but only to justify the company’s decision to double down on the all-in-one form factor rather than the modular tower design of the Mac Pro line. In fact, from the roundtable phase onward, discourse from Apple about the virtues of the iMac Pro always promoted it as an iteration on the all-in-one Pro’s knew and loved from the 27-inch 5k iMac. This resonates with Eisenman’s theory of the “dominant design,” wherein Apple assumed that the all-in-one was the natural conclusion of desktop PC design. Many Pros begged to differ, siding with Schaefer & Durham, arguing that the all-in-one elided the technical specificity of the machine and prevented the customization afforded by modular tower-based designs like those of the previous Mac Pros.

The emphasis on workers in the creative professions during the roundtable is equally illuminating and was one of the constant elements of the iMac Pro discourse. These are professionals whose work is grounded in aesthetics and thus Apple assumed they could be enticed by the “beautiful simplicity” of the iMac’s all-in-one form factor. The iMac’s built-in 5k display was an

initial justification for targeting these pros, as their visual needs would be ill-suited by an external display that would be a necessary accessory to the Mac Pro. However, by the end of John Ternus's presentation revealing the iMac Pro at the Worldwide Developer Conference, the display was a secondary concern.

4.2 *iMac Pro Press Kit Analysis*

Like all of Apple's flagship products since the mid-2000s, the iMac Pro was unveiled to the world with a dramatic video clip shown during a live presentation by one of the company's executives. In this case, Senior Vice President of Hardware Engineering John Ternus did the honors, unveiling the iMac Pro reveal video during his segment on new Mac hardware at the 2017 Worldwide Developer Conference. The video shows the iMac Pro emerging from a sea of featureless grey shadow, with its sharp edges and black input devices delineated the device against an otherwise endless void.



Figure 7: Still from iMac Pro Reveal Video

(Apple — WWDC 2017 Keynote, 2017)

A distorted blues guitar riffs over computer-generated fly-bys of an iMac Pro floating in a featureless grey expanse without a desk or even a power cable attached. A frontal view of the iMac Pro pans around to the side, emphasizing the machine's thin all-in-one chassis as the word "iMac" fades in on the left side of the device and "Pro" abruptly materializes to the right coinciding with a bass drop in the soundtrack. This short video's monochrome grey color palette is only interrupted by the blue background displayed on the iMac Pro's monitor. This serves to emphasize the machine's sleek all-in-one form factor and separate it from the familiar Apple promo film series through its darker hues. The video's abundance of (Space) Grey is a bold contrast to the company's traditional all-white aesthetic. That contrast is driven home by the appearance of the white text following Apple's typical visual branding, though off-centered by the machine until the conspicuous arrival of the term "Pro." In this way, Apple communicates that its newest iMac is not like the ones that came before; it is darker and more dramatic, it is for "professionals."

The San Jose Convention Center audience whooped and cheered as the lights faded up and revealed Ternus on-stage in front of an overhead still image of the grey computer, again with no wires attached, and its black keyboard and mouse. He begins describing the computer as follows:

"The first thing you'll notice is it features the same great design as our 27-inch iMac, but it's in this seriously bad-ass space grey finish. And with that stunning new color and gorgeous 5k display, this is without a doubt the most beautiful iMac we've ever made" (*Apple — WWDC 2017 Keynote, 2017*)

Framing the iMac Pro as noticeably familiar yet markedly different directly appeals to the devoted Apple fandom and customer base. As Eisenman notes, the minor change in color from sil-

ver to Apple's elusive Space Grey creates a "coffee shop effect" where devoted users of the company's products can instantly recognize the new "pro" model from across a crowded room. Furthermore, while it is unlikely that anyone is carrying their 21.5-pound iMac Pro to a coffee shop, the computer's darker color scheme would be visible in an open floor plan office amongst a sea of lighter silver "consumer" iMacs. Ternus seems to be very aware of this effect, as he breaks with Apple's typically staid corporate manner of public speaking to call the new finish "seriously bad-ass" and relishes in an extended applause break from the audience before continuing his presentation. Apple CEO Tim Cook also dropped his typically innocent demeanor to echo Ternus' claim later in the presentation, playing off the "bad-ass" comment as if it were an ad-lib.

Whether scripted or not, Ternus' opening salvo about the iMac Pro *looking* bad ass became the defining structure for a discourse on the serious aesthetic of the device in the days following the presentation. Many tech journalists facetiously quoted Ternus's remark. They described the new finish as "sinister" (Coldeway, 2017) and "hot" (Arment et al., 2017), even comparing its aesthetic to that of the *Star Wars* antagonist Darth Vader (Hackett et al., 6/6/17). In press releases issued after the announcement and eventual release of the iMac Pro, Apple refers to the computer as having a "gorgeous 27-inch Retina 5k display", "a stunning new space grey enclosure," and "the same amazingly quiet, thin and seamless aluminum and glass enclosure customers know and love" (Apple, Inc., 2017a, 2017b). On the Apple analysis podcast *Connected*, co-host Myke Hurley went so far as to say that users' inability to replace internal components of the machine is aesthetically reinforced because "I feel like if you put your hand in, it would bite you" (Hackett et al., 6/6/17). These aggressive, villainous, and at times overly masculine adjectives used to describe the iMac Pro's appearance reinforced the idea that professional hardware

came with an associated aesthetic seriousness absent in the silver iMacs that many “Pros” had admittedly been using for years prior.

The iMac Pro’s darker color created a visible status hierarchy among users overnight. Many fans and pundits lamented that the new finish and corresponding black accessories were exclusive to the \$5,000 “Pro” model (Arment et al., 2017; Statt, 2017). When the iMac Pro finally began shipping in December 2017, an inflated resale market emerged for the computer’s special edition black peripherals (Potuck, 2017). Apple did eventually start selling these highly sought-after variants of their mouse, keyboard, and trackpad separately. However, to maintain the hierarchical nature of the professional aesthetic, Apple sold each of these new “Space Grey” accessories for \$20 more than their silver counterparts (Dunn, 2018). This so-called “black tax” was not new for Apple. The company had previously released a black version of their flagship laptop, the MacBook Pro, that cost \$200 more than its similarly configured white counterpart (Hackett, 2015). However, with the iMac Pro, Apple combined higher performance and a limited colorway with the product marketing hierarchy of the Four Quadrants to create an even costlier form of exclusivity. Under this line of thinking, only the most dedicated fans or the most demanding users would “invest” in an iMac Pro rather than a consumer iMac, and the black chassis would be their reward.

4.3 *iMac Pro Review Process Analysis*

Apple’s pre-emptive announcement of the iMac Pro was not the only unique feature of its rollout. This computer also launched with a unique PR strategy, wherein Apple seeded review units to prominent YouTubers eschewing the traditional technology journalists they usually courted. Instead, those pundits from sites like *The Verge*, *Daring Fireball*, *TechCrunch*, and *Six*

Colors were invited to a brownstone in New York City where Apple engineers and representatives from popular third-party software vendors spent an afternoon demonstrating the power of the iMac Pro (Brownlee, 2017b; Gruber, 2017a). This strategy reveals two of Apple's priorities around the rollout of the iMac Pro.

First, the company prioritized the visual aesthetic of seriousness in its marketing of the product. Giving the first embargoed reviews of the device to YouTubers like Marques Brownlee and Jonathan Morrison ensured that the darker "Space Grey" finish would be visibly prominent and serve as a clear indicator of the "Pro" -ness of these iMacs. Morrison's review takes the form of a "setup tour," a standard technology video trope wherein the videographer gives a tour of their desk and all the technological products they use with slow-motion camera work and voiceover. Morrison even goes so far as to buy a new desk to color coordinate with the iMac Pro and excitedly explains that his favorite speakers already came in a matching shade of dark grey (Morrison, 2017). "I wanted to compliment and match that beautiful Space Grey finish," Morrison says towards the start of the review before comparing every object on his desk to the specific shade of grey to the iMac Pro's anodized aluminum chassis. The top comment on the YouTube video, below Morrison's own obligatory self-promotion links, is from another technology reviewer who sarcastically critiques him, writing, "Why is that outdoor extension cord ORANGE and not space grey? wtf is this? amateur hour? great vid =)" (Dave 2D, 2017).

Morrison barely touches on the technical specifications or the computer's performance in his video, despite this being one of the first reviews of the product to be officially sanctioned by Apple via their review unit seeding program. He jokingly tells those interested in "specs" to "get them wet naps ready," presumably so that they can wipe away their saliva (Morrison, 2017). Moreover, while his counterpart, Marques Brownlee, aka MKBHD, does spend a bit more time

on the technical specifications and various speed tests, the aesthetic is a dominant topic in these two sanctioned reviews (Brownlee, 2017b). In seeding two of the first review units of the iMac Pro to YouTubers and presumably emphasizing the computer's visual attributes in the corresponding briefs those videographers received, Apple strongly encouraged potential buyers to consider how the iMac Pro would look on their desks alongside what it could do for them. Through its review partners, the company hailed a class of knowledge worker interested in presenting the appearance of professionalism and high status, especially creative pros like Morrison and Brownlee whose tasks are aided by the iMac Pro's integrated 5k display.

Apple's second wave of pre-launch PR, spurred by the invite-only New York City briefing, exemplifies their second priority for the launch of the iMac Pro: justifying its \$5000 starting price. During this event, traditional technology journalists from various trade publications and general interest magazines were shown demonstrations of demanding computational tasks performed on the iMac Pro by Apple engineers and third-party software vendors. The demos included three Virtual Reality (VR) applications, Apple's Logic Pro X audio editing software, a Computer Aided Drawing (CAD) visualization program, and Apple's Final Cut Pro X video editing software (Gruber, 2017a). Reviews emerging from this event were more focused on technical specifications and performance than the YouTube reviews, but this praise was always couched in examples from these specific demonstrations. For instance, on an episode of *The Talk Show with John Gruber* released later that week, Gruber and *TechCrunch* columnist Matthew Panzarino had a lengthy discussion about a demonstration of the iMac Pro's ability to display three-dimensional CT scan results in VR. "For the cost of the medical equipment that's in like a radiologist's lab," Gruber said, "the \$10,000 iMac is nothing, right?" (Gruber, 2017b). *The Verge's* Dieter Bohn opened his review suggesting that most Apple fans refrain from purchasing the machine:

“The iMac Pro is available to order today, and if you’re a Mac user, you’re almost surely going to covet it. But for most people, it’s a better idea to *covet* this machine than it is to *acquire* it [emphasis in original]...Apple originally announced the iMac Pro back in June, so if you’re in the market for a computer like this, you likely already know most of what I’m about to tell you” (Bohn, 2017)

Apple was trying to combat sticker shock by limiting the conditions under which reviewers from widely read industry publications could experience the iMac Pro before its release. Circumstances such as these present the iMac Pro as a sort of luxury tool, intended only for those whose work requires considerable computational power or whose checking accounts can withstand a withdrawal of \$5000 or more on a relatively frequent basis. It is presented as a high-end computer for high-end users that ‘need it for their work,’ and that work is overwhelmingly within the creative industries. All but one of the applications demonstrated to these reviewers involved creating video, audio, visual art, or architectural renderings.

Noticeably absent from the New York event was Apple’s own software development program, X Code. Much of the outrage about the perceived abandonment of the “Trash Can” Mac Pro came from software developers, and yet their use cases were not even presented to the press. Part-time developer Craig Hunter was seeded a review unit in the first batch, alongside Brownlee and Morrison. Still, his review primarily focused on his full-time position as an aerospace engineer (Hunter, 2017). The lack of a straightforward developer story in the PR campaign surrounding the iMac Pro’s launch seems to demonstrate Apple’s awareness that the all-in-one form factor, with its lack of user-upgradable internal components, was not the ideal solution for all professionals. Rather than attempt to appease this audience, Apple chose to push the iMac Pro to

aesthetically minded workers in the creative industries in hopes that the promise of an imminent Mac Pro would keep developers from railing against their new all-in-one desktop computer.

Toward the end of his initial review video, Marques Brownlee calls the iMac Pro “the ideal high-end YouTuber Final Cut Pro machine,” and this characterization seems to be in line with how Apple itself viewed the machine. As prominent status symbols with growing influence in popular culture, YouTubers would be a reasonable target for a computer that is as concerned with its appearance as its performance. Sure enough, dozens of unboxing videos appeared when the iMac Pro began shipping to customers in early 2018, and the reactions from “Professional” YouTubers were overwhelmingly positive. Prominent Apple fan Justine Ezarik, aka iJustine, even cried tears of joy on camera when her iMac Pro arrived a day early, saying, “I cannot wait to edit on this sweet, sweet machine” (Ezarik, 2018). Creative workers like Ezarik, Brownlee, and Morrison illustrate Eisenman’s (2013) contention that “in the context of a technology that, while evolving, is evolving fairly incrementally, consumers are motivated to purchase new product models that have design attributes that potentially excite them and that effectively convey a sense of progress via novelty in design.”

Apple felt that they could capitalize on the excitement that arises from a novelty in design and their brand's aspirational status to create a “Pro” desktop that used the same all-in-one form factor as their consumer-grade machines, aesthetically firming up their Four Quadrants product strategy. Consistent praise for their industrial design and the iMac's continued sales success seems to have validated the continuation of this strategy. However, as developers and trade journalists began to raise concerns about the aging “trash can” Mac Pro Apple was forced to acknowledge that their adherence to this design had been misguided. Even before the iMac Pro reveal at WWDC 2017, Apple had promised a Pro computer that would outperform it. Further

analysis of this announcement will reveal how that process determined the nature of Apple's response and the new definition of "professional" they adopted when designing the 2019 Mac Pro.

4.4 *The Mac Pro*

Apple CEO Tim Cook opened the announcement of the Mac Pro at WWDC 2019 by emphasizing that the employees at Apple "love the Mac, and our customers do too. In fact, the Mac is the number one in customer satisfaction by far in the industry" (*Apple — WWDC 2019 Keynote*, 2019). This remark's thinly veiled attempt to reassure the fanbase grew even more obvious as he continued his speech:

"For Mac users looking to really push the limits of performance. There is one more spot in our lineup that the team has been working really hard to fill, to create a product that will take Mac further than it's ever gone before. And I am so excited and thrilled to show it to you now..." (*Apple — WWDC 2019 Keynote*, 2019)

What followed was the launch video for the modular Mac Pro tower that Apple had promised two years earlier at the Roundtable event. This machine, which was met with thunderous applause and rave reactions from attendees and pundits, addressed all the complaints leveled against the iMac Pro and its predecessor, the Trash Can Mac Pro.

The remainder of this section will analyze the press materials surrounding that machine's launch, the company's PR strategy in its rollout and the first reviews of the hardware. Based upon these sources, it is apparent that while Apple intended the Mac Pro to be a concession to its most offended Pro users it was also viewed as an opportunity to contain those users within its new brand strategy. The concessions Apple made, in terms of hardware and product design, broaden the scope of their "Pro" line and emphasize function over form while paying homage to

the specific wants and needs of developers and other traditional market segments. The modularity and expandability of the Mac Pro is the most notable of these concessions, but even this is controlled (albeit slightly) by Apple via the machine's proprietary cooling architecture. The extremely limited PR campaign surrounding the release and the choice to provide review units exclusively to high profile YouTube creators demonstrates Apple's continued struggle to negotiate the relationship between influencers and the broader Mac fandom. Within their evolving PR strategy, the company designated Alpha fans *within* all four quadrants of Jobs' product marketing grid. Those designated Alphas became the easily contained conduits between the fandom and the organization, beholden as they were to embargos, non-disclosure agreements and PR talking points.

4.5 *Mac Pro Press Kit Analysis*

Where the iMac Pro's launch video focused on thinness, dark colors and classic rock riffs the Mac Pro's reveal is much more understated. A series of staccato notes played on a piano over a bed of strings accompanies a corresponding set of extreme close-ups of the Mac Pro's ventilation ports, handles, feet and power button. The final reveal is a wide shot of the computer tower, situated on a slowly rotating pedestal on-stage with its accompanying monitor and the monitor's infamous articulated stand. Its physical presence in the room combined with the return to a more traditional tower-like design elicited thunderous applause from the developers and journalists in attendance at the WWDC keynote.

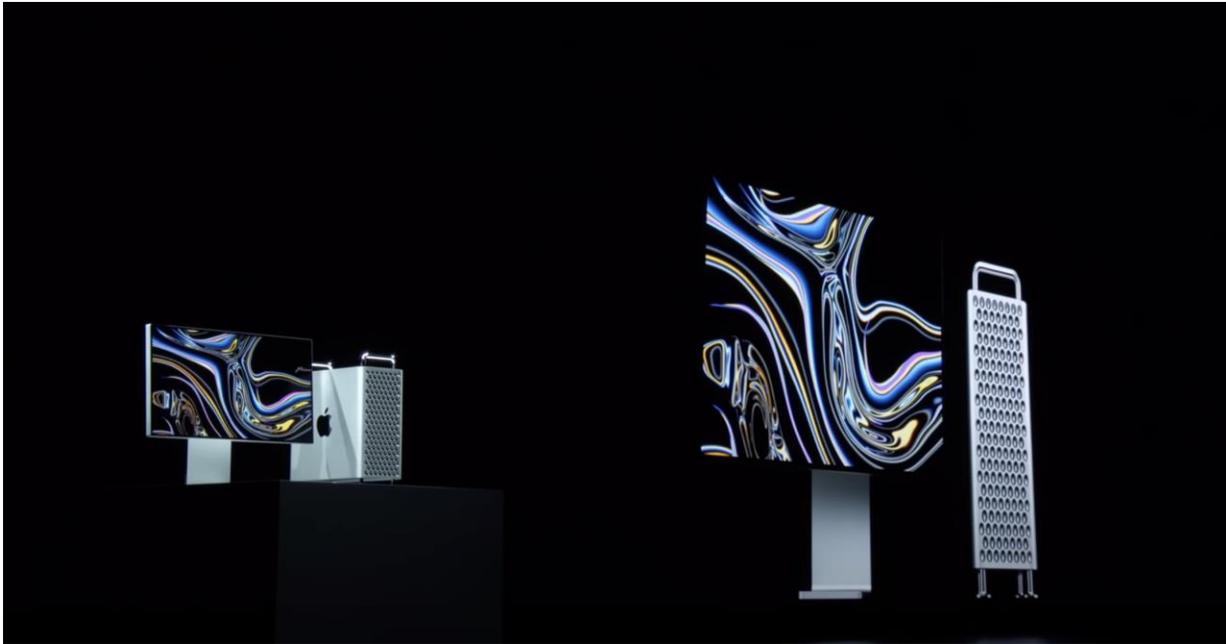


Figure 8: Still from Mac Pro Reveal Video

(*Apple — WWDC 2019 Keynote, 2019*)

When John Ternus took to the stage after the video he summed up the contrast with the iMac Pro succinctly, saying “As you can see, utility and function define the device...” (*Apple — WWDC 2019 Keynote, 2019*). That’s a far cry from his remarks two years earlier when he and Cook made cavalier declarations about bad ass colors and sinister aesthetics. For this device, Ternus explains that Apple “focused on delivering real world performance where it matters most” (*Apple — WWDC 2019 Keynote, 2019*).

To emphasize this supposed “real world performance” Ternus spent most of his presentation explaining the various components of the Mac Pro in front of 3D renders which showed how the machine could be opened and various parts could be swapped out. “...In designing this product,” he said, “we wanted to build an architecture that can meet the incredible diversity of Pro needs, a system that offers virtually unlimited possibilities for customization” (*Apple — WWDC 2019 Keynote, 2019*). The audience at WWDC and online was especially excited for the return of

PCI expansion, which would allow users to remove and replace expansion cards such as graphics modules, input/output cards and other features to meet more granular specifications than those offered in Apple's available inventory.

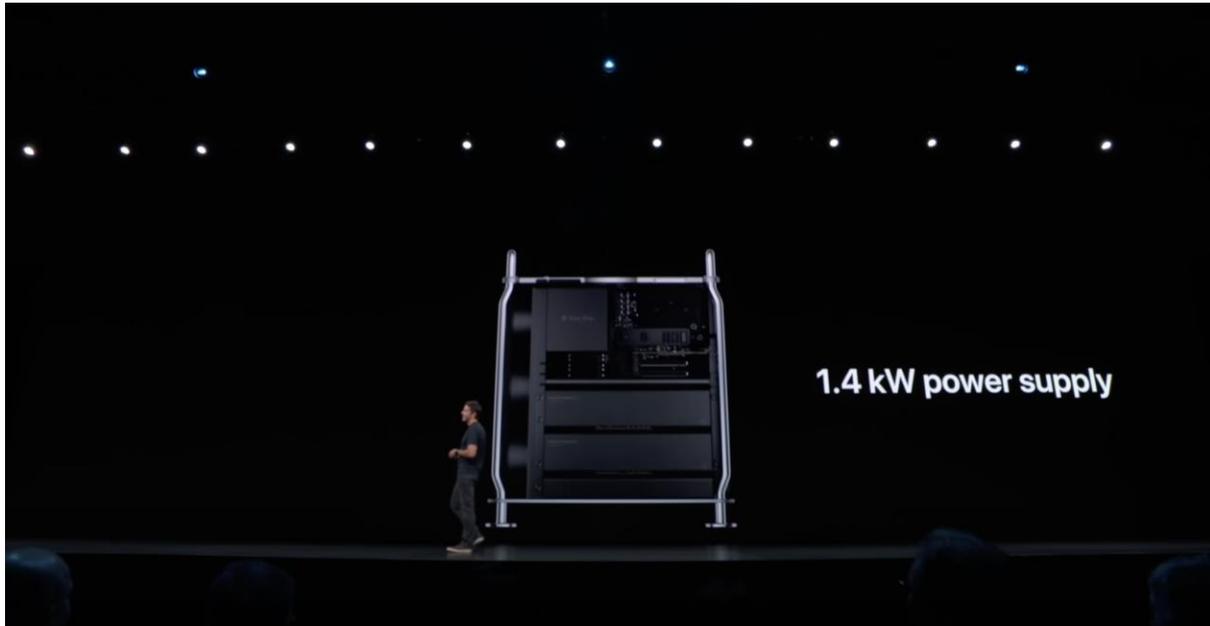


Figure 9: John Ternus discussing the Mac Pro's internals, in front of a 3D rendered cross section of the computer

(Apple — WWDC 2019 Keynote, 2019)

Of course, the company also offered their own proprietary spin on this industry standard by collaborating with chipmaker AMD on graphics modules which were “double wide” PCI cards and included cooling systems specifically designed for the Mac Pro's case. These would be available for purchase via Apple, but third-party cards would also be supported if users desired different configurations. Expansion, collaboration with third party chip vendors and an open admission of professional diversity were all surprising departures from the tone Apple had set with the Mac Pro just 24 months earlier. Ternus's presentation made it seem as though Apple had learned its

lesson and was willing to compromise on its brand priorities of simplicity and status-based marketing to deliver a product that was more suited to the demands made by their most offended “Pro” users.

Where the iMac Pro presentation consistently mentioned how the hardware engineers at Apple had packed pro performance into the compact body of an iMac, the Mac Pro was presented as being unapologetically large and designed around its modularity. Parallels to the first-generation “Cheese Grater” Mac Pro and other traditional tower-like PC’s were the subtext of this discussion, as the company attempted to assure its customers that they would not be backed into another “thermal corner” like they had been with the “Trash Can” Mac Pro.



Figure 10: 2019 Mac Pro next to the “Trash Can” Mac Pro

(Morrison, 2019)

Tim Cook only called the Mac Pro “gorgeous” once and John Ternus described its aluminum housing as “beautiful,” however these remarks were made in service of the product’s functionality. “The beautiful aluminum housing slides over the frame and latches into place...allowing 360 degree access to the internals,” Ternus told the audience (*Apple — WWDC 2019 Keynote*, 2019). The new Mac Pro’s entire frontispiece was made up of uniquely machined ventilation holes,

which the company argued would “maximize airflow while creating an extremely rigid system,” a far-cry from the hidden ventilation slits in the bottom of the iMac Pro’s monitor housing.

The refrain of flexibility and internal access was repeated in the Jony Ive narrated design showcase video uploaded to Apple’s YouTube channel a few weeks after WWDC. Ive explains that the new machine was built around a stainless steel ‘space frame’ which “serves as the foundation for absolute flexibility and uncompromising utility” (Apple, Inc., 2019). As he speaks these lines a Mac Pro is assembled component-by-component against a white backdrop until a single human hand is shown placing the final PCI card into the frame. Ive notes that the frame offers “360 degree access and multiple mounting points for different components” (Apple, Inc., 2019). This repeated reference to 360-degree access may seem redundant, but Apple’s emphasis underscores the unique value proposition of this design feature. In an era when most Macs (and many PC’s) offer little to no access to their internal components the new Mac Pro does away with all the company’s previous logic of effacement. If the iMac has always been about “the seeming immateriality of the design,” (Schaefer & Gigi Durham, 2007) the new Mac Pro was meant to assure its users that they could once again exercise agency and indeed mastery over their computer’s various component parts. In the second segment of this introduction video, hardware engineer Dan Riccio narrates a list of potential expansions and modifications users can undertake via this access, which he claims will “allow users to build a system that fits their needs” (Apple, Inc., 2019). Riccio’s statement is underscored by on-screen text driving home the point that Apple is aware of diversity in professional needs and will not attempt to build a one-size-fits-all system to address this audience.

As with all their previous products, Apple’s on-stage demonstrations effectively telegraphed the “Pros” that made up the intended audience for this new Mac Pro. John Ternus noted

that “one of the most critical areas of expansion is graphics. graphics performance is so important for tasks like animating 3d film assets or compositing 8k scenes, or building complex 3d environments...” (*Apple — WWDC 2019 Keynote*, 2019). He also shared that the company had been collaborating with software vendors such as Adobe, Avid and AutoDesk whose products were widely used in the creative and engineering fields. A member of Apple’s “Pro Software Division” provided demonstrations of new audio and video editing software (Logic Pro & Final Cut Pro, respectively) which could handle more media simultaneously than ever before while applying complex special effects in real time. Perhaps most notably though, Ternus spent a great deal of the presentation discussing Apple’s new Afterburner card, a “programmable accelerator,” which the company claimed could speed up many workflows but was designed for processing extremely high-resolution video files in their proprietary Pro-Res Raw format. For all of their talk of flexibility and diversity of professional use cases, Apple executives still referred to the Mac Pro as “absolutely, by far the most power, powerful Mac that’s ever been created for professional filmmakers and musicians” (*Apple — WWDC 2019 Keynote*, 2019).

The emphasis on the creative profession was most obvious in the subsequent presentation on the ProDisplay XDR, a 30-inch monitor which cost nearly as much as the Mac Pro itself and shipped without the \$999 stand needed to place it on a desk. Widespread laughter is clearly audible at the announcement of this pricing during the WWDC Keynote, with its audience of software developers who have little use for the display’s “Extreme Dynamic Range” and individually color calibrated LEDs. In fact, the only specific reference to software developers during this segment was a quick sidenote about the display’s stand being able to rotate it to a vertical orientation that would be “great for writing code” (*Apple — WWDC 2019 Keynote*, 2019). Presenter Colleen Novielli made it clear that this monitor, while functional for writing code, was intended

for a much more specific use case. She compared the Pro Display XDR to film reference monitors, which are used in color correction for television and motion picture production. Such displays, she explained “do deliver true HDR...but they're still missing [key] features. And they're incredibly expensive. This one's [a competitive display from Sony and it costs] \$43,000” (*Apple — WWDC 2019 Keynote*, 2019). In this context, Apple claimed, they were providing an “extraordinary display” at a bargain price that would “deliver every feature on a pro’s wish list and more,” if that Pro worked in a visual medium.

Based on the information included in the announcement at WWDC the new Mac Pro appeared to be aimed at a class of user who needed the most powerful components possible and was willing and able to update them without much help from Apple. The constant emphasis on internal access, customization and expandability was a clear shift in direction from the iMac Pro, which was pitched as being so powerful it wouldn’t need upgrading. The use of industry standard PCI expansion slots corrected for the proprietary technologies which slowed down updates to the Trash Can Mac Pro. And the occasional one-liners thrown to software developers and other professionals outside of the creative industries seemed to appease their demands, even if the machine’s \$5999 starting price and optional \$699 wheels did not. Apple’s choice to return to industry standard designs and expansion opportunities, combined with their admission of failure during the Mac Roundtable Event in 2017 signaled a return to their evangelistic Mac user audience. However, the rollout of review units prior to the first shipments of Mac Pros in late 2019 revealed that the company hadn’t undergone a complete change of strategy.

4.5.1 Mac Pro Review Process Analysis

As with the iMac Pro, the Mac Pro's intended audience would be further delineated through Apple's shipment of free hardware to individuals and publications in exchange for reviews. However, in some ways the Mac Pro was defined more by who did not receive review units. No trade publications received advance hardware, and most were forced to wait and purchase their Mac Pros alongside consumers in December 2019, when shipments were almost immediately delayed into early 2020 due to high demand. Some pundits, such as podcaster and journalist Jason Snell, were not offended by this as they felt that their workflows were more suited to the iMac Pro and didn't require the technical prowess of the Mac Pro (Hurley & Snell, 2019). When some fans balked at the price of the product and Apple's willingness to charge over \$40,000 for the most intensely customized variants, Snell wrote a column for MacWorld titled, "The Mac Pro is an important symbol, here's why you probably shouldn't buy it" (Snell, 2019). Others, including the hosts of the aforementioned *Accidental Tech Podcast* agreed that they didn't *need* such a powerful computer, but conceded that they *wanted* it for its symbolic value (Arment et al., 2019).

As they had with the iMac Pro, Apple seeded a small batch of computers to popular technology YouTubers. This time though, only three channels were given exclusive access to the new hardware: iJustine (aka Justine Ezarik), MKBHD (aka Marques Brownlee) and Jonathan Morrison. All three of these individuals had received review hardware in the past, including the iMac Pro, and all were well established as professional videographers with over 1 million YouTube subscribers. Their approaches to the review, while hewing mostly to Apple's clearly specified guidelines, still manage to show a diversity of approaches to this highly anticipated gadget and the marketing campaign pitching towards "Pro" users. Each video begins with an unboxing, a trope within YouTube technology reviews, wherein the on-camera personality opens

the product and discusses its packaging and aesthetic appearance. In the case of the Mac Pro, a considerable amount of the unboxing time was spent discussing the quality of the packaging and its “premium” feel, a sign of Apple’s and the reviewers’ continuing fascination with luxury and Alpha fans. From there the reviews diverge, as each YouTuber approaches the discussion of technical specifications and the testing of hardware features based on their own workstyle. By contrasting the detailed review portions, this section will delineate the three variants of “Pro” that Apple hoped would be interested in the Mac Pro.

Marques Brownlee, or MKBHD as he is known on YouTube, has a reputation for working with the most powerful hardware available and wastes little time getting to the detailed specification of the Mac Pro. Two and a half minutes into his eleven-minute video he starts listing statistics and test results, which he continues throughout the remainder of the piece.



Figure 11: Brownlee discusses 8k video render times for Pro Macs

(Brownlee, 2019)

He concedes to the audience that he has, in fact, been editing on the Mac Pro for two weeks prior to the release of his review and found that it handled his ultra-high resolution 8k video footage better than any other machine in his studio. He notes that he is particularly impressed by the video render speed, which results in wait times less than half of those he experienced on his iMac Pro (Brownlee, 2019). Towards the end of the video, Brownlee attempts to situate the Mac Pro within the context of creativity and productivity, saying:

“I feel like at this point, you know in 2019-2020, it takes a lot to get me inspired as a creator, because the tools I have at my disposal are so unlimited. Like there's no way I can take this [Red 8k] camera to its full potential. But I was pretty consistently pushing the iMac Pro, the fastest machine that runs Final Cut Pro, to its full potential. So, it's not like magic. It's not like having this Mac Pro is going to make my videos better or make anyone's videos better. But it's just...sort of a headroom unlocker. Essentially it pulls down the barrier for what I'm willing to try as a creator because of power, or speed or time” (Brownlee, 2019)

Brownlee’s mix of programming jargon such as “headroom” and creative ambition speaks to a class of professionals who view the output of their work as art but feel that their creativity is strained by the tools at hand. His pitch for the Mac Pro is essentially that it will allow him to remove that restraint for some undetermined period, presumably until higher and higher resolution video or newer faster machines force him to upgrade. Professional hardware then, follows the model outlined by Ross and Arment, wherein computers are the craft tools of a new sort of trade and the most advanced computers are tied to the most technically complex labor.

Jonathan Morrison’s review is every bit as technical as Brownlee’s but includes a much longer unboxing and clocks in at nearly nineteen minutes of total runtime, the longest of the

three officially sanctioned reviews. His style is much less formal than Brownlee's and he frequently makes light jokes at the expense of other tech pundits, Apple fans and the company itself. Upon unboxing the Pro Stand for the Pro Display XDR, which had received audible laughs at the launch event, Morrison anthropomorphizes it, saying "You are so freaking beautiful, don't ever let anybody tell you that you are not worth \$1,000" (Morrison, 2019). When running common benchmarking tests on the machine such as the Geekbench CPU test or the CineBlend 3D rendering model he jokes about the reliance other reviews place on these arbitrary measures. "We gotta see this thing flex just a little bit, to make Leo Laporte happy...we'll even throw a little power gadget in there just for the Linus Tech Tips crowd" he jokes, referencing the host of the long-running podcast This Week in Tech and another popular technology YouTuber (Morrison, 2019). Morrison's appeals to the fandom and his decision to run their preferred benchmarks on camera rather than simply reporting the results, as Brownlee does, demonstrates a perceived alignment with the Mac userbase.

Like Brownlee, Morrison mentions that he has been working with the machine off-screen but takes it a step further by bringing in collaborators from other fields, including musicians and photographers, to test other workflows. These results are not reported, likely due to Apple's direction for the videos to focus on unboxing and first impressions, but the short clips we are shown display the Mac Pro in a collaborative studio environment surrounded by creative professionals.



Figure 12: Morrison and Collaborators work at a Mac Pro

(Morrison, 2019)

This review demonstrates the most diverse range of uses for the Mac Pro and argues for its status as a “Pro” machine by virtue of its raw metrics rather than the specific use case of video editing. Morrison clearly intended to speak to the fan base and assuage their concerns about the new machine. He accomplished this by using familiar metrics, namedropping other popular figures in the fandom and bringing in other “Pros” to work on the machine even though it is unclear if this was a violation of the terms of the review, as no other reviewers did so. Morrison’s review argues that Apple not only cares about the Mac but is as excited as fans are for this latest generation of high-end computer.

Fannish excitement is a key element of Justine Ezarik’s videos on her iJustine channel, and her unboxing and review of the Mac Pro is no exception. She exclaims emotionally throughout the unboxing that “I just can’t believe this is in my house,” and upon booting up the machine she asks “Is everyone okay? Am I okay? I’m not sure” (Ezarik, 2019). After the unboxing she even brings out her 2009 “Cheese Grater” Mac Pro for an emotional side-by-side comparison of

her first Pro Mac and the new computer. Justine does not typically shoot the high-resolution footage for which the Mac Pro was ostensibly built, so she rented three 8K cameras and hired a three-person crew to film her unboxing, which would then give her footage to edit in the review section. For her, this project is as much a celebration of the Apple brand and its latest accomplishment as it is a review of a high-end computer. To add b-roll to the video she even visits the Apple Store where she waited in line over night for her first iPhone and talks about how important that moment was in her engagement with the brand. “I have a lot of memories here,” she says, “I slept outside here for 55-plus hours for the iPhone 6...this place has a very special place in my heart, especially this Apple Store” (Ezarik, 2019).



Figure 13: Ezarik’s trip to the Apple Store during her review video

(Ezarik, 2019)

Ezarik’s review contains the least technical information of the three officially sanctioned videos in Apple’s initial press push for the Mac Pro. She briefly discusses the quality of the Pro Display XDR in a voiceover which plays on top of time lapse footage of her editing at the Mac Pro. She

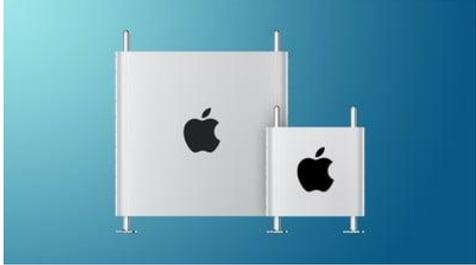
also mentions the need for additional storage drives to compensate for the size of the 8k footage she has shot, but otherwise spends much of her time admiring the machine's aesthetics and expressing joy at the mere existence of a new "Pro" Mac in her life. Her review is representative of the Alpha fans whose engagement with Apple products is largely symbolic and focused on their aesthetic qualities and the status they imbue, as discussed by Marwick.

As this analysis has shown, Apple's three sanctioned reviews of the Mac Pro presented the product to three different segments of their ideal audience. Brownlee's video addressed creative professionals with a first-hand account of how the machine fit into the workflow of a video production studio over the course of two weeks of work. Morrison's review addressed the larger technology community and the subset which overlapped with the Apple fandom by focusing on standard benchmarks and appealing to in-group references. Finally, Ezarik's video spoke to the group Kawasaki called "The Cult of Apple," the Alpha fans whose excitement about this machine was tied primarily to its brand association and secondarily to its functionality. The Mac Pro may have been intended as a course correction for the more Alpha-focused iMac Pro and its aspirational prosumer audience. However, the reliance on influencers and fandom figures to promote this high-end product shows the company's attempt to reconcile their reputation as a lifestyle brand with the demands of their less fashion-forward customers. If Pro Mac users wouldn't buy into an influencer-focused product, Apple would simply focus their influencers on the products that those customers would buy. These videos may not have convinced any new customers to purchase a Mac Pro, but they served as a reassurance of Apple's commitment and its values to the fanbase. Here, they argued, was a truly Pro Mac; a machine so powerful that creators had to buy new cameras to accommodate it. This, they argued, was the upper limit of the Fourth Quadrant.

5 CONCLUSION

Six months after Apple unveiled the redesigned Mac Pro the company announced that they were undertaking a two-year transition during which their Mac products would shift from Intel-based Central Processing Units to in-house designed Apple Silicon chips. CEO Tim Cook claimed that these new CPUs would “make the Mac stronger and more capable than ever,” adding that “I’ve never been more excited about the future of the Mac” (Apple Inc., 2020). Perhaps unsurprisingly, the first Macs to transition that fall were the consumer-focused MacBook Air and Mac Mini. However, the technical improvements over Intel Macs were monumental, with the Mac Mini even outperforming the iMac Pro on some benchmark tests (Hansen, 2020). Just before unveiling a new crop of Apple Silicon powered consumer iMacs, which would certainly yield negative press surrounding said benchmarks, Apple quietly discontinued the Intel-based iMac Pro in the Spring of 2021 (Simon, 2021). As of this writing the all-in-one pro desktop shows no sign of returning, though the company is rumored to be producing *two* new modular tower-like Mac Pro products based upon their proprietary CPU architecture (Clover, 2021). This pivot in Pro hardware strategy demonstrates Apple’s return to the Four Quadrants strategy even as they vertically integrate another key component of their Mac supply chain.

Table 2: Updated Four Quadrant Strategy Diagram

	Consumer	Professional
Desktop	<p>Apple Silicon iMac</p>  <p>(Apple, Inc., 2021)</p>	<p>Rumored Mac Pro(s)</p>  <p>(Clover, 2021)</p>
Portable	<p>MacBook Air</p>	<p>MacBook Pro</p>

Apple revised its PR strategy to include more podcasters and bloggers popular within the Apple fandom following the 2017 Mac Roundtable event. This strategy accelerated through the release of the 2018 Mac Mini, which was the first piece of promotional hardware given to Marco Arment as an *Accidental Tech Podcast* (Arment, 2018). Arment's colleagues Casey Liss and John Siracusa also received their first invites to product launch events as members of the press corps during this period (Arment et al., 2018). At subsequent WWDC conferences Apple even provided an on-site podcast studio where attendees could book time to record recaps of the conference for their listeners (Kahn, 2018). Well respected fan podcasts, as well as those hosted by existing Apple PR contacts, began receiving exclusive interviews with executives coinciding with key product launches (Hurley & Snell, 2021). The incorporation of these fan publications into the PR machinery of the corporation, while welcomed by fans, quickly became a new method of

containment as podcast episodes and YouTube videos were held under embargo and subjected to specified talking points and non-disclosure agreements. Thus, Apple was able to improve its reputation with the fandom simply by widening its circle of Alphas to include trusted voices from semi-professional outlets that maintained a good relationship with the Cult of Mac.

The controversy analyzed in this thesis demonstrates the power of fan intervention during times of crisis brought on by industrial externalities. Factors ranging from supply chain management issues to executive turnover and strategic realignment caused Apple to move away from a core piece of industrial lore which it had publicly communicated to its fans. When the “Trash Can” Mac Pro’s lack of updates made the crisis of planned obsolescence and the rejection of the Four Quadrants strategy apparent, fans fought back and insisted upon a specific style of desktop computer. Apple’s rushed announcement and subsequent cancellation of the iMac Pro demonstrated that the company had been forced to concede to these demands and build a modular system more suited to the diversity of professional use cases. The timing of these events, within a period of larger technological upheaval including the increased popularity of mobile technologies and the transition to Apple Silicon provided a fraught scene which amplified the interventions of what might otherwise have been a vocal minority of Mac users. However, the fandom’s success in eliciting an apology and strategic redirection from one of the world’s largest companies demonstrates that a well-timed campaign of sustained textual production can shift the balance of power towards the will of the consumer.

Future analyses bridging the gap between industrial and fan studies should be mindful of the example set by these “Pro” Mac users. Their perception of abandonment and spitefulness resulting from the breach of industrial lore should be compared to negative responses to textual

change in other fandoms. The containment of dissenting voices within fandom via professionalization (i.e., providing pre-release hardware for review) should also be considered as a means for corporate control of consumer discourse. Structural analysis of fan publishing platforms will also be necessary to determine the financial and reputational consequences for those creators who publicly voice dissent within established communities. Finally, as the economies of the United States and other western nations continue to shift from production to knowledge and service-based labor the definition of professionalism and the nature of products marketed to “working professionals” should be a continual topic of analysis.

This thesis has demonstrated that Apple’s founder and CEO Steve Jobs created and perpetuated a product marketing strategy, The Four Quadrants, which became a vital element of the industrial lore of the company. His passing and subsequent changes in Apple’s business model created tension between the expectations of the company’s intentionally cultivated evangelistic fanbase and the Mac hardware design team. By analyzing the ensuing controversy through the lenses of both media industrial discourse analysis and fan studies, this thesis posits that fandom has the power to intervene in such moments of thwarted expectation. However, this power is limited by the logic of neoliberal capital, particularly the cycle of crisis that results from planned obsolescence. Fans may argue for products that serve their specific needs more effectively, but they will still be required to purchase them at a premium. Their excitement about each new product rumor demonstrates their pleas to be “fleeced,” while their critical reviews of these products upon release push the industry to shift their strategies. Such interventions are, at best, a minor victory in the larger war for consumer agency in the new media landscape.

REFERENCES

- Amelio, G., & Simon, W. L. (1998). *On the Firing Line: My 500 Days at Apple*. Harper Collins Publishers Inc.
- Apple, Inc. (n.d.). *Obtaining service for your Apple product after an expired warranty*. Apple Support. Retrieved July 19, 2021, from <https://support.apple.com/en-us/HT201624>
- Apple, Inc. (1998). *Form 10-k405 (Annual Report (Regulation S-K, item 405))*.
- Apple, Inc. (2006, April 5). *Apple Introduces Boot Camp—Apple*. <https://www.apple.com/newsroom/2006/04/05Apple-Introduces-Boot-Camp/>
- Apple, Inc. (2013a, October 22). *Apple Updates iMac*. Apple Newsroom. <https://www.apple.com/newsroom/2013/10/23Introducing-the-All-New-Mac-Pro-The-Most-Radical-Mac-Ever/>
- Apple, Inc. (2013b, October 22). *Introducing the All New Mac Pro—The Most Radical Mac Ever*. Apple Newsroom. <https://www.apple.com/newsroom/2013/10/23Introducing-the-All-New-Mac-Pro-The-Most-Radical-Mac-Ever/>
- Apple, Inc. (2017a, June 5). *iMac Pro, the most powerful Mac ever, arrives this December*. *Apple Newsroom*.
- Apple, Inc. (2017b, December 14). *iMac Pro, the most powerful Mac ever, available today*. *Apple Newsroom*.
- Apple, Inc. (2019, June 27). *Introducing the Mac Pro and Pro Display XDR*. <https://www.youtube.com/watch?v=goHokEUdiyY>
- Apple Inc. (2020, June 22). *Apple announces Mac transition to Apple silicon—Apple*. <https://www.apple.com/newsroom/2020/06/apple-announces-mac-transition-to-apple-silicon/>

- Apple, Inc. (2021, April 20). *iMac features all-new design in vibrant colors, M1 chip, and 4.5K Retina display*—Apple. <https://www.apple.com/newsroom/2021/04/imac-features-all-new-design-in-vibrant-colors-m1-chip-and-45k-retina-display/>
- Apple—WWDC 2017 Keynote. (2017, June 9). Apple.
<https://www.youtube.com/watch?v=oaqHdULqet0>
- Apple—WWDC 2019 Keynote. (2019, June 4). Apple.
https://www.youtube.com/watch?v=psL_5RIBqnY
- Arment, M. (n.d.). About Marco. *Marco.Org*. <https://marco.org/about>
- Arment, M. (2016, November 5). A world without the Mac Pro [Blog]. *Marco.Org*.
- Arment, M. (2018, November 6). *The 2018 Mac Mini – Marco.org*.
<https://marco.org/2018/11/06/mac-mini-2018-review>
- Arment, M., Liss, C., & Siracusa, J. (2016a, July 16). *Free to Play Dogs* (No. 179).
<https://atp.fm/179>
- Arment, M., Liss, C., & Siracusa, J. (2016b, November 3). *Dark Night of the Soul* (No. 194).
- Arment, M., Liss, C., & Siracusa, J. (2016c, December 29). *Something Has Gone Wrong* (No. 202).
- Arment, M., Liss, C., & Siracusa, J. (2017, June 6). *A Conversation with Siri* (No. 225).
- Arment, M., Liss, C., & Siracusa, J. (2018, March 31). *I Slowly Ate the Crystals* (No. 267).
<https://atp.fm/267>
- Arment, M., Liss, C., & Siracusa, J. (2019, December 5). *The Way Corn Grows* (No. 355).
<https://atp.fm/355>
- Beckman, T., & Harris, G. (2007). The Apple of Jobs' Eye: An Historical Look at the Link between Customer Orientation and Corporate Identity. *CHARM*.

- Belk, R., & Tumbat, G. (2005). The Cult of Macintosh. *Consumption Markets & Culture*, 8(3), 205–217. <https://doi.org/10.1080/10253860500160403>
- Bohn, D. (2017, December 14). The iMac Pro is a Beat, But It's Not For everybody. *The Verge*.
- Bonnington, C. (2017, November 2). *iPhone X reviews: Why Apple gave the \$1,000 phone to a bunch of YouTube celebrities*. Slate. <https://slate.com/technology/2017/11/iphone-x-reviews-why-apple-gave-the-1000-phone-to-a-bunch-of-youtube-celebrities.html>
- Brownlee, M. (2017a, June 8). *iMac Pro: Is It A Trap?*
- Brownlee, M. (2017b, December 12). *iMac Pro: 1 Week Impressions!*
<https://www.youtube.com/watch?v=h-h5Mhlt6O0&list=PLXxxwNrjBL-FGHT-KSNS11B5oFsy6VW1YM&index=2>
- Brownlee, M. (2019, December 10). *Mac Pro Unboxing & Second Impressions: The Power is Back!* <https://www.youtube.com/watch?v=DOPswcaSsu8>
- Busse, K. (2018). The Ethics of Studying Online Fandom. In S. Scott & M. A. Click (Eds.), *The Routledge companion to media fandom* (pp. 9–18). Routledge, Taylor & Francis Group.
- Cheng, J. (2016, November 21). Apple posts new iPod shuffle ad. *Ars Technica*. <https://arstechnica.com/gadgets/2006/11/6041/>
- Chun, W. H. K. (2016). *Updating to remain the same: Habitual new media*. The MIT Press.
- Clover, J. (2021, January 15). *Apple Working on Two New Mac Pro Desktops, One of Which Will Be Reminiscent of Power Mac G4 Cube*. MacRumors.
<https://www.macrumors.com/2021/01/15/apple-two-new-mac-pro-models/>
- Coldeway, D. (2017, June 5). Apple debuts iMac Pro with beefy specs, real ports, \$5K starting price. *TechCrunch*.

- Collins, N., Volkheimer, J., & Murphy, J. (2020). Who's Who: Setting a Standard Nomenclature Using a Fan Folksonomy. In C. L. Wang (Ed.), *Handbook of Research on the Impact of Fandom in Society and Consumerism*: IGI Global. <https://doi.org/10.4018/978-1-7998-1048-3>
- Dave 2D. (2017). *Why is that outdoor extension cord ORANGE and not space grey? Wtf is this? Amateur hour? Great vid =)* [Comment].
<https://www.youtube.com/watch?v=W17V4LwkfQE&lc=Ugyt8E9a0MiTKZYFs8Z4AaABAg>
- Dunn, J. (2018, March 27). You don't have to buy an iMac Pro to get a space gray Magic Keyboard and Mouse now. *Ars Technica*. <https://arstechnica.com/gadgets/2018/03/you-dont-have-to-buy-an-imac-pro-to-get-a-space-gray-magic-keyboard-and-mouse-now/>
- Eisenman, M. (2013). Understanding Aesthetic Innovation in the Context of Technological Evolution. *Academy of Management Review*, 38(3), 332–351.
<https://doi.org/10.5465/amr.2011.0262>
- Ezarik, J. (2018, February 3). *iMac Pro 18-Core Unboxing!*
<https://www.youtube.com/watch?v=UxuhecF-3c0&t=330s>
- Ezarik, J. (2019, December 10). *Mac Pro and Pro Display XDR Unboxing!*
<https://www.youtube.com/watch?v=TqjwSNRDrO8>
- Fiske, J. (1992). Audiencing: A cultural studies approach to watching television. *Poetics*, 21(4), 345–359.
- Gruber, J. (2016, June 25). *Phil Z* (No. 159).
- Gruber, J. (2017a, December 14). First Impressions of the New iMac Pro. *Daring Fireball*.
https://daringfireball.net/2017/12/imac_pro_first_impressions

- Gruber, J. (2017b, December 18). *Blaming a Platypus* (No. 209). <https://daringfireball.net/the-talkshow/2017/12/18/ep-209>
- Gurman, M. (2017, December 20). How Apple Alienated Mac Loyalists. *Bloomberg*.
<https://www.bloomberg.com/news/articles/2016-12-20/how-apple-alienated-mac-loyalists>
- Hackett, S. (2012, December 13). iMac G3: The Macintosh That Saved Apple. *512 Pixels*.
<https://512pixels.net/2012/12/imac/>
- Hackett, S. (2015, February 27). Future Classics: The black MacBook. *512 Pixels*.
<https://512pixels.net/2015/02/future-classics-the-black-macbook/>
- Hackett, S., Hurley, M., & Viticci, F. (6/6/17). *LEGO For Shortcuts* (No. 145). <https://www.relay.fm/connected/145>
- Hansen, D. (2020, November 20). The Mac mini is Now Faster Than the iMac Pro. *Mac O'Clock*. <https://medium.com/macoclock/the-mac-mini-is-now-faster-than-the-imac-pro-d5128a4efea4>
- Hardwick, T. (2016, November 2). *Professional Mac Users' Complaints List Grows After "Disappointing" Apple Event—MacRumors*. MacRumors.
<https://www.macrumors.com/2016/11/02/professional-mac-users-complaints-grow-apple-event/>
- Havens, T. (2014). 2. Towards a Structuration Theory of Media Intermediaries. In *Making media work* (pp. 39–62). New York University Press.
- Hunter, C. (2017, December 12). 2017 iMac Pro Review [Personal Blog]. *HRT Apps*.
<http://hrtapps.com/blogs/20171212/>

- Hurley, M., & Snell, J. (2018, July 2). *The Podcasting and Anniversary Episode* (No. 200).
<https://www.relay.fm/upgrade/200>
- Hurley, M., & Snell, J. (2019, December 16). *It's Always the Chips* (No. 276). <https://www.relay.fm/upgrade/276>
- Hurley, M., & Snell, J. (2021, April 26). *The Time for Color is Now* (No. 350). <https://www.relay.fm/upgrade/350>
- Ingraham, N. (2019, August 15). Apple's bulbous, colorful iMac went on sale 21 years ago today. *Engadget*. <https://www.engadget.com/2019-08-15-apple-imac-turns-21-this-week-in-tech-history.html>
- Jenkins, H. (2008). *Convergence culture: Where old and new media collide* (Updated and with a new afterword). New York Univ. Press.
- Jobs, S. (1998, July 8). *MacWorld 1998 Keynote*. <https://www.youtube.com/watch?v=gdY-iqVzPjAc>
- Kahn, J. (2018, June 5). Behind the scenes at Apple's WWDC Podcast studio setup [Gallery]. *9to5Mac*. <https://9to5mac.com/2018/06/05/behind-scenes-apple-podcast-studio-wwdc/>
- Kawasaki, G. (1990). *The Macintosh way*. Scott, Foresman.
- Kawasaki, G. (2015). The art of evangelism. *Harvard Business Review*, 93(5), 108–111.
- Leswing, K. (2020, November 10). *Apple is breaking a 15-year partnership with Intel on its Macs—Here's why*. CNBC. <https://www.cnbc.com/2020/11/10/why-apple-is-breaking-a-15-year-partnership-with-intel-on-its-macs-.html>
- Liss, C. (n.d.). About Casey Liss. *Liss Is More*. <https://www.caseyliss.com/about>
- Livingstone, R. (2011a). The Myth of Classlessness in Apple's "Get a Mac" Campaign. *Flow Journal*. <https://www.flowjournal.org/2011/04/myth-of-classlessness/>

- Livingstone, R. (2011b). Better at Life Stuff: Consumption, Identity, and Class in Apple's "Get a Mac" Campaign. *Journal of Communication Inquiry*, 35(3), 210–234.
<https://doi.org/10.1177/0196859911413469>
- Markoff, J. (1997, March 15). Apple To Trim Jobs and Its Product Line. *New York Times*. Factiva. <https://global.factiva.com/ga/default.aspx>
- Marwick, A. E. (2013). *Status update: Celebrity, publicity, and branding in the social media age*. Yale University Press.
- Moore, G. (1965). Cramming more components onto integrated circuits. *Electronics*, 38(8).
- Morrison, J. (2017, December 12). *The Perfect iMac Pro Setup*. <https://youtu.be/WI7V4LwkfQE>
- Morrison, J. (2019, December 10). *MASSIVE Mac Pro + Pro Display XDR Unboxing!*
<https://www.youtube.com/watch?v=CUFB8xVJ9iM>
- Novet, J. (2019, November 27). *Intel chip shortage is pulling down PC makers' revenue expectations*. CNBC. <https://www.cnbc.com/2019/11/27/intel-chip-shortage-pulls-down-pc-makers-revenue-expectations.html>
- Paczkowski, J. (2013, January 9). Steve Jobs Was Right. Tablets Are Cars. PCs Are Trucks. *All-ThingsD*. <https://allthingsd.com/20130109/steve-jobs-was-right-tablets-are-cars-pcs-are-trucks/>
- Panzarino, M., & Dillet, R. (2017, April 6). Transcript: Phil Schiller, Craig Federighi and John Ternus on the state of Apple's pro Macs. *TechCrunch*.
- Piccoli Trapletti, G. (2015). *Timeline of the product Apple iMac* [Digital Artwork]. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:Timeline_of_the_product_Apple_iMac.svg
- Piller, C. (1995, April). The First clones. *MacWorld*, 92–101.

- Potuck, M. (2017, December 26). First set of space gray iMac Pro accessories show up on eBay for \$2500. *9to5 Mac*. <https://9to5mac.com/2017/12/26/space-gray-magic-keyboard-track-pad-mouse/>
- Ravenscroft, T. (2019, June 20). The top 10 Apple Macs from the Macintosh 512k to the Mac Pro. *Dezeen*.
- Rindova, V. P. (2007). Cultural Consumption and Value Creation in Consumer Goods Technology Industries. *Academy of Management Proceedings*, 2007(1), 1–6.
<https://doi.org/10.5465/ambpp.2007.26508241>
- Rosa-Aquino, P. (2020, October 23). Fix, or Toss? The ‘Right to Repair’ Movement Gains Ground. *New York Times*. <https://www.nytimes.com/2020/10/23/climate/right-to-repair.html>
- Ross, A. (2003). *No-collar: The humane workplace and its hidden costs*. Basic Books.
- Salinas, S. (2018, August 2). Apple hangs onto its historic \$1 trillion market cap. *CNBC*.
<https://www.cnbc.com/2018/08/02/apple-hits-1-trillion-in-market-value.html>
- Schaefer, P. D., & Gigi Durham, M. (2007). On the Social Implications of Invisibility: The iMac G5 and the Effacement of the Technological Object. *Critical Studies in Media Communication*, 24(1), 39–56. <https://doi.org/10.1080/07393180701214520>
- Sharma, V. (2020, May 7). iMac at 22: How Design Drives Success. *Vectornator*.
<https://www.vectornator.io/blog/imac-anniversary#>
- Simon, M. (2021, March 7). Apple discontinues iMac Pro as M1 redesign of Apple’s iconic all-in-one looms. *Macworld*. <https://www.macworld.com/article/3610715/apple-discontinues-imac-pro-as-signs-point-to-imminent-m1-launch.html>

- Snell, J. (2016, November 2). *Why 2016 is such a terrible year for the Mac*. MacWorld.
<https://www.macworld.com/article/229079/why-2016-is-such-a-terrible-year-for-the-mac.html>
- Snell, J. (2018, May 6). The original iMac: 20 years since Apple changed its fate. *Six Colors*.
<https://sixcolors.com/post/2018/05/the-original-imac-20-years-since-apple-changed-its-fate/>
- Snell, J. (2019, December 4). The Mac Pro is an important symbol, but you probably shouldn't buy it. *MacWorld*. <https://www.macworld.com/article/3487723/the-mac-pro-is-an-important-symbol-but-you-probably-shouldnt-buy-it.html>
- Snell, J. (2020a, August 6). 2020 iMac review: The last picture show. *Six Colors*. <https://sixcolors.com/post/2020/08/2020-imac-review-the-last-picture-show/>
- Snell, J. (2020b, September 7). *20 Macs For 2020: #15 – DayStar Genesis MP – Six Colors* [Blog]. SixColors. <https://sixcolors.com/post/2020/09/20-macs-for-2020-15-daystar-genesis-mp/>
- Snell, J. (2020c, October 19). 20 Macs for 2020: #10—Power Computing. *Six Colors*.
<https://sixcolors.com/post/2020/10/20-macs-for-2020-10-power-computing/>
- Spence, E. (2019, May 2). *Tim Cook Explains MacBook Processor Issues*. Forbes.
<https://www.forbes.com/sites/ewanspence/2019/05/02/apple-macbook-pro-macbook-air-delay-intel-arm-release-date-specifications/>
- Stanfill, M. (2019). *Exploiting fandom: How the media industry seeks to manipulate fans*. University of Iowa Press.

- Statt, N. (2015, September 9). *Here's why Apple made the stylus that Steve Jobs hated*. The Verge. <https://www.theverge.com/2015/9/9/9298117/apple-pencil-stylus-ipad-pro-steve-jobs>
- Statt, N. (2017, June 5). Apple says only iMac Pro buyers will get space gray mouse and keyboard. *The Verge*. <https://www.theverge.com/2017/6/5/15743110/apple-imac-pro-space-gray-magic-mouse-keyboard-colors-wwdc-2017>
- Streeter, T. (2015). Steve Jobs, romantic individualism, and the desire for good capitalism. *International Journal of Communication*, 9, 19.
- Takamura, J. (2007). Molecular Branding: A Study on the Nature of the Relationship Between Product Design and Brand Loyalty. *Reading the Object*, 45–55. https://www.academia.edu/161874/Molecular_Branding_A_Study_on_the_Nature_of_the_Relationship_Between_Product_Design_and_Brand_Loyalty
- Vogan, T. (2018). Live Sports, Documentary Prestige, and On-Demand Culture. In D. Johnson (Ed.), *From Networks to Netflix: A Guide to Changing Channels*. Routledge.
- Wang, C. L., Sarkar, J. G., & Sarkar, A. (2018). Hallowed be thy brand: Measuring perceived brand sacredness. *European Journal of Marketing*, 53(4), 733–757.
- Wells, P. (2019, June 27). *Accidental hero: John Siracusa is a celebrity among tech nerds*. Sydney Morning Herald. <https://www.smh.com.au/entertainment/tv-and-radio/accidental-hero-john-siracusa-is-a-celebrity-among-tech-nerds-20190624-p520p4.html>