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Incessant Influence: Social Networking Sites are Utilizing Patented Technology to Commandeer Human Emotion and Behavior

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INCESSANT INFLUENCE: SOCIAL NETWORKING SITES ARE UTILIZING PATENTED TECHNOLOGY TO COMMANDEER HUMAN EMOTION AND BEHAVIOR

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ABSTRACT

I will observe the use of patented technology as integrated into social media and social networking sites (SNSs) for the purpose of influencing user behavior and emotion. There is insufficient law or regulation that precludes social media platforms or SNSs from developing or utilizing technology with the effect of influencing consumers behaviorally and emotionally. I will explore ways in which law and/or regulation may assist in managing such technology's use to prevent users' exploitation. Government intervention, reviving the moral utility doctrine, or expanding the requirements of patentability to include more broad social implications may serve as a resolution to limiting tech giants from developing and SNSs from utilizing patented technology in a manner harmful to the human.

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I. INTRODUCTION

Technology is central to modern life. It has transformed the way in which humans communicate with one another: in the modern world, humans need not meet face-to-face in order to connect. Virtual spaces now exist in which humans can develop and maintain relationships. These virtual, online spaces in which people socialize are better known as social networking sites (SNSs) and/or social media platforms. As a consequence of heavy usage, users rely on these online spaces to interpret the meaning behind their thoughts, ideas, and, under extreme circumstances, to confirm their existence.

In the virtual space, social media and social networking came to existence through the advent and evolution of the internet. The concepts of social media and social networking are distinct.¹ Social media is a “strategy and outlet for broadcasting”² and is still seen as a “media which is primarily used to transmit or share information with a broad audience.”³ Social networking is defined as a “tool and a utility for connecting with others”⁴ and the “act of engagement as people with common interests associate together and build relationships through community.”⁵ Examples of social networking sites include websites, online gaming, messaging boards, and information sharing websites.⁶ The differences between social networking and social media lie primarily in the “features and functions put into [them] by their creators which dictates the way they are to be used.”⁷ However, one may argue that platforms such as Facebook, Instagram, and YouTube have evolved to become an almost indistinguishable marrying of the two concepts.⁸ Social networking sites such as Facebook are often seen as a component of the “multifaceted phenomena”

1. Simeon O. Edosomwan, *The history of social media and its impact on business*, 16 J. OF APPLIED MGMT. AND ENTREPRENEURSHIP, 5 (2011).

2. *Id.*

3. *Id.*

4. Michael Cohn, *The Benefits of Social Media in the Current Economy*, COMPUKOL COMMUNICATIONS LLC (May 10, 2010), <https://www.compukol.com/the-benefits-of-social-media-in-the-current-economy/>.

5. Edosomwan, *supra* note 2.

6. MARK CARRIER, FROM SMARTPHONES TO SOCIAL MEDIA: HOW TECHNOLOGY AFFECTS OUR BRAINS AND BEHAVIOR 7 (2018).

7. *Id.*

8. Andrew Froehlich, “*What’s the difference between social media and social networking?*” TECHTARGET (Sept. 24, 2020), <https://searchunifiedcommunications.techtarget.com/answer/Whats-the-difference-between-social-media-and-social-networking>.

of social media.⁹ For purposes of this Comment, the term “social networking sites” (SNSs) will be considered as such.

The use of these websites does not come without a cost. Even on platforms advertised as “free” to users, “if you’re not paying for the product, then you are the product.”¹⁰ Websites manipulate the way in which messages are received by users by making their own determinations of what is meaningful.¹¹ Developers will accumulate user data from activity on the website to create new software that will retain user attention with the intent of increasing user activity. In the age of social media, data mining is the most dynamic evidence base of human behavior.¹² Data mining is defined as “the process of finding anomalies, patterns and correlations within large data sets to predict outcomes.”¹³ Tech giants like Microsoft, which offer software in exchange for payment, have patented data mining technology.¹⁴ Otherwise “free” SNSs such as Facebook, Instagram, and Snapchat utilize such technology for their own business objectives,¹⁵ ultimately selling user data to business customers.¹⁶

Increased platform use generates more user data for SNSs to use or sell. Business customers, for example, use data collected by SNSs to create targeted advertising and messages or find trends and track them for advertising purposes. Exposure to advertisements and messages paid for by business customers does not go unnoticed—even while passively participating on SNSs. Eventually, with enough exposure, human behavior may change to act in line with the advertisers’ goal as intended through the advertisement. As it follows, human behavior is a product.¹⁷

The federal government must act to protect SNS users from exploitation and manipulation by tech giants and, through this action, force tech giants to reconsider more ethical designs in exchange for patent protection. Federal legislation may prevent or sanction tech giants from creating harmful

9. JAMES CURRAN, NATALIE FENTON, AND DES FREEDMAN, MISUNDERSTANDING THE INTERNET 126 (2012).

10. Jeff Orlowski, *The Social Dilemma* (2020).

11. GANAEL LANGLOIS, MEANING IN THE AGE OF SOCIAL MEDIA 32 (2014).

12. Bogdan Batrinca & Philip C. Treleaven, *Social Media Analytics: A Survey of Techniques, Tools and Platforms*, 30 AI & SOC’Y, 89 (2015).

13. “Data Mining: What it is & why it matters,” SAS, https://www.sas.com/en_us/insights/analytics/data-mining.html.

14. U.S. Patent No. 7930197 (filed Sept. 28, 2006).

15. *Why Social Media is ‘Pay to Play’ in 2018 (And How to Get the Best Bang for Your Buck)*, NEIL PATEL, <https://neilpatel.com/blog/pay-to-play-social-media/>.

16. Kalev Leetaru, “What does it mean for social media platforms to ‘sell’ our data?” FORBES (Dec. 15, 2018), <https://www.forbes.com/sites/kalevleetaru/2018/12/15/what-does-it-mean-for-social-media-platforms-to-sell-our-data/?sh=4c5b3ee32d6c>.

17. *Id.*

technologies. The revival of the moral utility doctrine may prevent developers from protecting harmful technologies by patent. Extending patentability requirements to consider more ethical designs for social network patents would save users from the types of coercion and manipulation that they are imperceptibly exposed to when participating on SNSs.

This Comment observes the use and effects of the sorts of social network patented technology integrated in SNSs and considers whether government interference, the revival of the moral utility doctrine, or adjustments to patentability requirements are possible solutions to avoid the furtherance of patent protection for harmful technological developments utilized by SNSs. Section I discusses how SNSs determine what is meaningful and the implications that come with this power of defining meaning. Section II highlights human adaptation to newer technologies and exploitation of users following the rise of social media. Section III looks specifically to data mining as employed by SNSs with relation to user data. Finally, Section IV evaluates current government intervention at both the state and federal levels considers a revival of the moral utility doctrine, and reviews patentability requirements for social network patents as they currently stand while proposing an expansion of patentability requirements to include ethical design.

II. THE SEARCH FOR MEANING

The search for meaning is a fundamental motivation for humans throughout their lifetime and may very well be a necessary component for human psychological functioning.¹⁸ The question of “what is meaning” requires an explanation of two broad types of meaning. The first type is a basic, denotative meaning—“the meaning of a sentence or sign,” while the second type is existential—“the meaning of life.”¹⁹ Attaining meaning in life requires “elaborating ideas about purpose and value and instantiating those abstractions in one’s activities, or at least in one’s perception of those activities.”²⁰

To find meaning, an examination of the second type of meaning, existential meaning, is necessary. With both types of meaning, an examination of symbol use is studied: “[symbols] stand for (signify) something else (objects); [symbols] represent a “convention,” “habit,” or “social rule.”²¹ In the physical, “any functioning of symbols . . . requires agents capable of situating those

18. *Search for Meaning in Life*, PSYCHOLOGY, <http://psychology.iresearchnet.com/social-psychology/prosocial-behavior/search-for-meaning-in-life/>.

19. Roy F. Baumeister, Roy F. Landau, *Finding the Meaning of Meaning: Emerging Insights on Four Grand Questions*, 22 REV. OF GEN. PSYCHOLOGY, 1 (2018).

20. *Id.*

21. *Id.* at 2.

symbols within broader conceptual networks—and thereby understanding the symbols and acting on the meaning.”²² In the present, the systems behind SNSs are the agents behind the understanding of and acting on symbols. As a result, the systems behind SNSs determine what is meaningful based on what does, or does not, appear on one’s feeds upon the opening of the site or application—this is the “meaning machine.”

A. *The Guided Search*

As a function of their reliance on symbols and the way they are acted upon, (or similar – a intro clause to explain why the second clause is true), Social networking sites do not recognize users as separate from the “meaning machine.” Rather, the user (like the platform itself) performs an economic role.²³ Because of this, platforms make the most out of passive participation by seducing the user through unlimited access to connectivity, relationships²⁴ and the satisfaction that comes with “Likes,”²⁵ and friend counts.²⁶ Through this constant seduction, the platforms tap into the psychic processes at both the social, cultural, and even unconscious and perceptual levels.²⁷

Even while browsing, lurking, or otherwise engaging in mindless or unproductive behaviors on SNSs, corporate social networking sites have an impact on one’s psychosocial life. As a result, an attachment between the user and the SNS develops and the user relies on the SNS because it views it as an everchanging, constantly unfolding world; the SNS provides the user with an understanding of their self and of others.²⁸ Users are captured by the meaning machines that determine what is of social value and norm. In today’s world, by participating in virtual social activities, one is seen and heard. Here, by engaging in activities that offer an answer and a valuation to what has meaning, and overall satisfaction and gratification that comes with being noticed, the user continues to participate in such activities. The user, if participating relative to what is meaningful as defined by the machine, falls in line with the meaning machine.²⁹ Where humans would once independently reach conclusions of

22. *Id.*

23. *Id.* at 87.

24. Marc Meyer, “Does Social Media Seduce Us?” DIRECT MARKETING OBSERVATIONS (Jul. 28, 2008), <https://directmarketingobservations.com/2008/07/28/does-social-media-seduce-us/>.

25. C.R. Blease, *Too Many “Friends,” Too Few “Likes”?* *Evolutional Psychology and “Facebook Depression,”* 19 REV. OF GEN. PSYCHOLOGY, 2 (2015).
Bogdan Batrinca & Philip C. Treleaven, *Social Media Analytics: A Survey of Techniques, Tools and Platforms*, 30 AI & SOC’Y, 89 (2015).

26. *Id.* at 8.

27. GANAËLE LANGLOIS, *MEANING IN THE AGE OF SOCIAL MEDIA* 94 (2014).

28. *Id.*

29. *Id.*

what is meaningful through conceptual networks, humans now engage with systems and processes that make these determinations themselves—usually, with their own interests in mind.

In author, professor, and academic Ganaele Langlois' work, *Meaning in the Age of Social Media*, Langlois transforms social philosophers Michel Foucault and Maurizio Lazzarato's theories in the social networking and media environments. Broadly put, both Foucault and Lazzarato's principles of governance find that an "ensemble of techniques and procedures put into place to direct the conduct of men and to take account of the probabilities of their action and their relations."³⁰ In SNSs, all types of information have meaning, and some types of information are more meaningful than others.³¹ Langlois finds that the locus of power in such governance is not in the content, but rather in the meaning that is determined "more meaningful."³² The meaningfulness of content on such platforms is determined through "the attribution of cultural values, the shaping of cultural perceptions of the platform, and the establishment of a horizon of communicative possibilities and agencies."³³ It is here that the information or content is translated as meaningful or not.

At Facebook, "[w]hich content is shown or omitted in the News Feed is determined via a ranking algorithm that Facebook continually develops and tests in the interest of showing viewers the content they will find most relevant and engaging."³⁴ The gatekeepers of information are those at Facebook and those developing the algorithms and information-sorting processes. User behavior does have a hand in what information is shown, though. What remains unknown is how user activity is processed by the algorithm to continue the movement of information and content. With this in mind, to believe that Facebook does not promote the interests most beneficial to their corporation (even the personal interests and biases their leaders hold) and does not influence the content which "holds the most meaning," and/or is the "most relevant" or "engaging," to some extent, is to be naïve.

B. Power at Play

The effects of social media on users has been a popular topic of research since the advent of social media and SNSs. It is apparent, if not obvious, that social media influences the emotion and behavior of its users. This effect,

30. *Id.* at 43.

31. *Id.*

32. *Id.*

33. *Id.* at 48.

34. Adam D. I. Kramer, Jamie E. Guillory, Jeffrey T. Hancock, *Experimental evidence of massive-scale emotional contagion through social networks*, 111 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE U. S., 1 (2014).

though, may be grave.³⁵ Many attribute social media's addictive qualities that feed into personal egos to pervasive contemporary influence social media has.

In 2012, the Core Data Science Team at Facebook, Inc., in collaboration with the Departments of Communication and Information Science at Cornell University, conducted a widely criticized³⁶ social experiment on their users. Although claims of emotional contagion through social networks have been contested, data collected over a 20-year period show that moods can be transferred through social networks.³⁷ Emotional contagion is the idea that "emotions can be transferred from one person to another online," even when face-to-face contact is lacking.³⁸ The experiment, conducted within a week's time, exposed emotional expressions on Facebook's "News Feed." Nearly 700,000 users experienced this sort of manipulation on their News Feeds to test whether a form of emotional contagion materializes when users are exposed to "affective expression" and posts consistent with that exposure.³⁹

The experiment found that when users are exposed to an emotion on their News Feeds, positive or negative, users are likely to post content reflecting emotions consistent with their News Feeds.⁴⁰ Subsequently, the study supported previously contested (and controversial) claims that emotions do not transfer within social networks.⁴¹ Understandably, Facebook, Inc. faced extreme backlash following the conduction of this experiment for several reasons,⁴² including the fact that Facebook did not inform users of this experiment or offer users an opportunity to consent to participation.⁴³ The scope of participants was broad—any user who viewed Facebook in English was qualified for selection.⁴⁴ Following the experiment, Facebook was not reprimanded for the conduction of this experiment despite the lack of consent

35. Twenge, J.M., Joiner, T.E., Rogers, M.L. & Martin, G.N., *Corrigendum: Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 ASS'N FOR PSYCHOOGY. SCIENCE, 3-17 (2018). (Discusses the rise of reported adolescent depression and suicide following a concomitant rise in screen time on social media platforms.)

36. *Facebook admits failings over emotion manipulation study*, BBC NEWS (Oct. 3, 2014), <https://www.bbc.com/news/technology-29475019>.

37. Adam D. I. Kramer, Jamie E. Guillory, Jeffrey T. Hancock, *Experimental evidence of massive-scale emotional contagion through social networks*, 111 PROCEEDINGS OF THE NAT. ACADEMY OF SCIENCES OF THE U. S., 1. (2014).

38. MARK CARRIER, FROM SMARTPHONES TO SOCIAL MEDIA: HOW TECHNOLOGY AFFECTS OUR BRAINS AND BEHAVIOR 5-6 (2018).

39. *Id.*

40. *Id.* at 2.

41. *Id.*

42. *supra* note 38.

43. *Id.*

44. *Id.* at 1.

by its participants. Further, in a statement published by Facebook following the backlash, Facebook was unapologetic and “unprepared for the reaction the paper received” upon publication.⁴⁵

For the purpose of the experiment, Facebook intentionally manipulated content on users’ News Feeds. In doing so, either affirmative or negative expressions showed up more consistently and frequently on users’ News Feeds. Users were unaware of this experiment taking place and the results illustrate that users were affected by its conduction. The outcome of the experiment supported Facebook’s original contention and proved that user emotion is impacted by social networks. Facebook, through the conduction of this experiment, affirmed a formerly perceived power of influence on their users, and revealed a lack of oversight and consequence for their experimentation and expression of power and influence.

III. ADAPTATION AND EXPLOITATION

There are advantages and disadvantages to all great innovation. New modes of communication may feel disruptive because adaptation is required. The most obvious and significant advantage to social networking and media is instantaneous connectivity. A lesser, more obscure downside, however, is its potential for subtle, yet incredible, impact on human behavior and emotion.

Humans have adapted to the use of new technologies over the past two decades because of its increased presence in everyday life. The accessibility to the world through the convenience of computers, smartphones, and other portable technologies have greatly attributed to the success of social media networking platforms such as Facebook, Twitter, and Instagram. Even platforms themselves have evolved. Facebook, for example, was created with the intent of connecting students living in residence halls with other students in other residence halls.⁴⁶ The depths of its power was not realized until the user-base had grown substantially. By 2011, researchers reported that over 90% of college students in the U.S. were using Facebook.⁴⁷ In 2020, there were a reported 1.84 billion daily active users and 2.80 billion monthly active users on Facebook.⁴⁸

As humans become more competent in, and familiar with, the evolving world of technology, new methods of emotional and behavioral manipulation

45. Mike Schroepfer, *Research at Facebook*, FACEBOOK (Oct. 2, 2014), <https://about.fb.com/news/2014/10/research-at-facebook/>.

46. Carrier, *supra* note 23, 5–6.

47. *Id.* at 6.

48. *Facebook Reports Fourth Quarter and Full Year 2020 Results*, FACEBOOK (Jan. 27, 2021), https://s21.q4cdn.com/399680738/files/doc_news/Facebook-Reports-Fourth-Quarter-and-Full-Year-2020-Results-2021.pdf.

are developed. Often, these methods may be so imperceptible that humans do not recognize an explanation for the changes of their emotion or behavior. Social media has become a tool of “manipulation” and “addiction.”⁴⁹ Although humans have largely accepted SNSs as a form of communication, the degree of human influence on these platforms often goes unnoticed.

In its past and most simple form, Facebook was limited in its functions. One could “Add” familiar faces as a “Friend” and update a status to share how one is feeling or what one is thinking in that moment. As a result of its quick and widespread popularity, Facebook began incorporating third-party applications on their website that offer some attractive service or feature such as “The Honesty Box,” or “Bumper Sticker.”⁵⁰ To the ordinary user at first glance, this seemed like a fun way to pass the time. However, prior to activating the third-party application, users had to agree to the offering of their information in exchange for the use of the application. The type of information collected by such third-party applications often include a user’s name, age, list of friends and “Likes.” What the user may not have realized, however, is that allowing third-party applications to access such information directly contributes to the application’s contribution to manipulating users. These third parties, like the social networks themselves, utilize the data collected to further their own interests.

IV. DATA MINING

Data mining as a concept existed long before the advent of social networking, media and online communications. Data that comes from data mining is utilized by groups to better understand populations of people in order to predict outcomes.⁵¹ It is a powerful tool in directing messages to the masses and is most commonly used by advertisers. Advertisers are able to frame and distribute advertising and other messaging to audiences who, as illustrated by the data, will likely respond in the interest of the advertiser after coming in contact with the advertisement or message. Companies across various industries use this sort of targeted advertising in the hopes of sparking action from the recipient of the advertisement or message. The better an advertisement or message is targeted, the more likely it is that users will take some sort of action, provided a high frequency of users engage with it.

49. Jeff Orlowski, *The Social Dilemma* (2020).

50. Dani Fankhauser, *18 Facebook Fossils We’ll Remember Forever*, MASHABLE (Jan. 25, 2013), <https://mashable.com/2013/01/25/facebook-fossils/>.

51. JILL LEPORE, *IF THEN* 3-4 (2020).

MARK CARRIER, *FROM SMARTPHONES TO SOCIAL MEDIA: HOW TECHNOLOGY AFFECTS OUR BRAINS AND BEHAVIOR* 5, 6 (2018).

Developers are constantly creating technology, subject to patent protection, that uses the collection of some sort of user data for some specific purpose. There are no limitations to how the data collected through user use can or cannot be used.

A. Personal data mining

In 2006, Microsoft Corporation filed a patent application for “Personal data mining” technology. The application states that:

Personal data mining mechanisms and methods are employed to identify relevant information that otherwise would likely remain undiscovered. Users supply personal data that can be analyzed in conjunction with data associated with a plurality of other users in conjunction with other users to provide useful information that can improve business operations and/or quality of life. Personal data can be mined alone or in conjunction with third party data to identify correlations amongst the data and associated users. Applications or services can interact with such data and present it to users in a myriad of manners, for instance as notifications of opportunities.⁵²

The application notes that data-mining models (DMM) can be used to store historical data and examine new data to determine whether the new data fits within a “desired pattern or rule.”⁵³ Patent holder Microsoft Corporation further asserts that data mining is employed by large corporations for the purpose of understanding “complex business processes.”⁵⁴ Such business purpose is achieved through the “discovery of relationships or patterns in data relating the past behavior of a business process.” This process is useful to advertising and energy consumption industries, and more generally in sales prediction, production, association and risk assessment.⁵⁵ One of the systems included in the patent, system 100, can be utilized to make suggestions or recommendations on “books to read, movies or plays to see and/or places to visit, among other things.”⁵⁶ Even if a user moves from one geographic location to the other, system 100 will recognize the change and can recommend joining particular groups.⁵⁷ This patented technology, in a very simplistic understanding, collects user data to recommend an action.

52. U.S. Patent No. 7930197 (filed Sep. 28, 2006).

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

B. Presenting additional content items to a social networking system user based on receiving an indication of boredom

In 2017, Facebook, Inc. filed a patent application for “[p]resenting additional content items to a social networking system user based on receiving an indication of boredom.”⁵⁸ The purpose of the patent is to keep users engaged with and interacting with the social networking system by presenting content that the user is likely to engage with. The application states that:

A social networking system presents content items to a user and determines if the user has less than a threshold level of interest in the presented content items based on one or more user interactions with the presented content items. For example, the social networking system determines the user has less than the threshold level of interest in the presented content items if a threshold number of requests for content are received within a time interval. If the user has less than the threshold level of interest in the presented content items, the social networking system identifies additional content items to present to the user, and may also identify content items previously presented to the user. Content is selected from the additional content items or from the previously presented content items and presented to the user.⁵⁹

In addition, the application notes that an initial set of content items are displayed on the user’s device through the SNS. The type of content presented to the user varies based on the information the SNS receives from other users; sponsored content, such as advertisements, may also be presented to the user.⁶⁰ A threshold of interest in the content presented must be met in order to direct the technology on how to update the content appearing on the user’s device. The threshold is determined by “monitoring user navigation through content items” and “determining that the user has not paused during the user navigation” for a set amount of time.⁶¹

The threshold level of user engagement with certain content is based on the user’s eye position based on one or more images captured by the user’s device.⁶² If the user is focused on the device and eye contact is captured, the eye contact contributes to determining whether the threshold has been met. This technology manages multiple types of data in order to determine what kind of content the user has to engage with in order to remain interested and on the

58. U.S. Patent No. 10419560 (filed Jan. 17, 2017).

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

SNS. This technology is directly interested in human behavior as it sorts through data in order to maintain the attention of an SNS user.

V. THE FUTURE

A. *Government Intervention*

There is currently no federal legislation that prevents or sanctions SNSs or tech giants from producing technology for use on SNSs even if such technology is harmful to consumers. The federal government has made strides toward regulating content on SNSs or appealing already-existing laws' content that shield SNSs from liability over content posted by their users,⁶³ but has failed to take action against preventing harmful technology practices on SNSs. The SMART Act, proposed by Sen. Josh D. Hawley (R-MO), specifically targets patented technology on SNSs such as "infinite scroll" and "auto refill."⁶⁴ However, the Act did not receive much support and was criticized by some, with most criticisms based on the idea that users should have "independence" in deciding whether to participate on SNSs.⁶⁵ Other criticisms of the Act and similar legislation question whether it is the duty of the federal government to intervene in any capacity.⁶⁶

Despite the of the federal government's lack of successful intervention, state governments have proven slightly more successful. California and Illinois have both enacted legislation to address unfair technology and practices utilized by SNSs and tech giants like Amazon and Google.⁶⁷ The California Consumer Privacy Act (CCPA) secures new privacy rights for consumers but is mostly geared toward overall transparency in how user information is collected and used: it does not prevent the development of new technologies that utilize user data for business purposes or user exploitation. Conversely, the Biometric Information Privacy Act is Illinois' state-level attempt to stand up to big tech and media attacks the sorts of dangerous technology utilized by SNSs might be a better approach. The Act, enacted in 2008, serves to prevent the use of

63. "The Justice Department Unveils Proposed Section 230 Legislation", THE U. S. DEP'T OF JUSTICE (Sept. 23, 2020), <https://www.justice.gov/opa/pr/justice-department-unveils-proposed-section-230-legislation>.

64. Casey Newton, "New legislation is putting social networks in the crosshairs," THE VERGE (Aug. 1, 2019), <https://www.theverge.com/2019/8/1/20749517/social-network-legislation-hawley-privacy-research>.

65. *Id.*

66. *Id.*

67. Devin Coldewey, "Who Regulates Social Media?" TECH CRUNCH (Oct. 19, 2020), <https://techcrunch.com/2020/10/19/who-regulates-social-media/>.

biometric identifiers without user consent. The Act has already proven its effectiveness in litigation against infringers.⁶⁸

B. Reviving the Moral Utility Doctrine

The Patent Clause authorized Congress to “promote the Progress of ... useful Arts, by securing for limited Times to ... Investors the exclusive Right to their ... Discoveries.”⁶⁹ Justice Joseph Story is credited for introducing the idea of the moral utility doctrine.⁷⁰ In *Lowell v. Lewis*, Justice Story wrote: “all that the law requires is, that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society.”⁷¹ Thus, the word “useful” is “incorporated into the act in contradistinction to mischievous or immoral.”⁷²

In a later decision, Justice Story defined “useful invention” as “one as may be applied to some beneficial use in society, in contradistinction to an invention, which is injurious to the morals, the health, or the good order of society.”⁷³ It is not necessary to establish, that the invention is of such general utility, as to supersede all other inventions now in practice to accomplish the same purpose.”

⁷⁴ With regard to the relationship between utility and the law, Justice Story states that: “the law, however, does not look to the degree of utility; it simply requires, that it shall be capable of use, and that the use is such as sound morals and policy do not discountenance or prohibit.”⁷⁵ The moral utility doctrine would be used to invalidate patents,⁷⁶ specifically, two main types of patents: “gambling devices ‘injurious to the morals of society’ and inventions with a ‘mischievous tendency’ to deceive the public.”⁷⁷

The court’s reliance on the moral utility doctrine would decrease significantly following *Juicy Whip, Inc. v. Orange Bang, Inc.* The court states that “the requirement of ‘utility’ in patent law is not a directive to the Patent and Trademark Office or the courts to serve as arbiters of deceptive trade

68. See *In re Facebook Biometric Info. Privacy Litig.* (N.D. Cal. 2016).

69. U.S. Const. art. I, § 8, cl. 8.

70. Julien Crockett, *Morality: An Important Consideration at the Patent Office*, 108 CAL. L. REV. 1 (2020).

71. *Lowell v. Lewis*, 15 F. Cas. 1018, 1019 (C.C.D. Mass 1817).

72. *Id.* at 1019.

73. *Bedford v. Hunt*, 3 F. Cas. 37, 37 (C.C.D. Mass. 1817).

74. *Id.*

75. *Id.*

76. Laura A. Keay, *Morality’s Move Within U.S. Patent Law: From Moral Utility to Subject Matter*, 40 AIPLA Q. J. 409, 410 (2012).

77. Julien Crockett, *Morality: An Important Consideration at the Patent Office*, 108 CALIFORNIA L. REV. 1 (2020). See also Laura A. Keay, *Morality’s Move Within U.S. Patent Law: From Moral Utility to Subject Matter*, 40 AIPLA Q. J. 409, 410 (2012).

practices.”⁷⁸ Instead, the court recommended that other federal agencies should protect consumers from deceptive practices.⁷⁹

However, influence on human behavior has evolved from the deceptive practice in *Juicy Whip, Inc.* These technologies influence human behavior—for better or for worse. The revival of the moral utility doctrine, then, may be a solution to SNS developers abusing the incentivization and subsequent protection of harmful technology in SNSs. With Justice Story’s definition of “useful invention” in mind, the sorts of technology being created by SNSs would fail under the moral utility doctrine, as they are forthrightly “injurious to the morals, the health, or the good order of society.”⁸⁰ Thus, these technologies would be denied patent protection. Nonetheless, the moral utility doctrine remains dormant.⁸¹

C. Expanding Patentability Requirements

As they currently stand, the requirements for patentability are insufficient to combat technologies that harmfully influence human emotion and behavior because they do not consider such influence. Because of this, expanding patentability requirements to include ethical designs as they relate to social network patents is necessary.

Presently, the USPTO grants patent protection to “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof . . . subject to the conditions and requirements of this title”⁸² so long as they are not “offensive to public morality.”⁸³ The invention must be a type of invention that is eligible for patent. Congress has defined four basic types of invention as patent eligible: (1) processes, (2) machines, (3) articles of manufacture, and (4) compositions of matter.⁸⁴ Beginning in 2010, the USPTO began classifying technology for SNSs as such—“Social Networking” patents⁸⁵—but, some of the technology behind social network patents overlaps between different categories such as Class 705, Business Methods, Class 707, Database Management, and Class

78. *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1367 (Fed. Cir. 2004).

79. *Id.*

80. *Bedford v. Hunt*, 3 F. Cas. 37 at 37.

81. See *Geneva Pharms., Inc. v. Glaxosmithkline PLC*, 213 F. Supp 2d 597, 610 (E.D. Va. 2002) (quoting *Callison v. Dean*, 70 F.2d 55, 58 (10th Cir. 1934) (Generally, a patent may possess utility “‘if it will operate to perform the functions and secure the results intended, and its use is not contrary to law, moral principles, or public policy.’”).

82. 35 U.S.C. § 101.

83. *Id.*

84. *Id.*

85. U.S. PATENT AND TRADEMARK OFFICE, PATENT COUNTS BY CLASS BY YEAR, CY 1977-2014 (Mar. 29, 2021), <https://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcbby.htm#Prinfig>.

709, Data Transfer.⁸⁶ The functional form in which patents are drafted is a fundamental reason as to why social network patents reach social-relational activity and extend beyond technical means.⁸⁷ With functionally drafted software patents, “patentees draw property boundaries around the outcome of a particular technology rather than the technical means by which the outcome is accomplished.”⁸⁸ This is the case with Class 705, Business Method patents; the outcome involves social institutions, relationships, and activities.⁸⁹ An issue with these functionally drafted software patents is that they increase the tendency of broad-scope claims⁹⁰—“where the outcome is broad, the patent will be broad.”⁹¹

Aside from the usual “bundle of rights” property that is awarded, an essential right of a property-owner is that of exclusivity: “the legal capacity (‘right’) on the part of a property-owner to exclude others from the object that she claims as her property.”⁹² In the context of social network patents, “exclusivity, powers of disposition, and sovereign-like authorities of agenda-setting are being legally-recognized and exerted vis-à-vis social relationships and social interaction.”⁹³ Facebook, remaining within the boundaries of their patents, has legal entitlement over computer-based social relationships⁹⁴ and is able to manipulate the means by which users form social relationships.⁹⁵

There are a total of four types of claims in which the USPTO has flagged as involving abstract idea: (1) “Fundamental economic practices,” (2) “Certain Methods of Organizing Human Activity,” (3) “An Idea ‘Of Itself,’” and (4) “Mathematical relationships/formulas.”⁹⁶ As related to claims involving social relationships and activities, the USPTO has regarded such patent claims as potentially involving “abstract ideas”⁹⁷ and therefore, subject to patentability.

86. Nowotarski, Zank & Bowman, “Increasing Patent Allowance Rates by Selectively Targeting a More Technological Patent Class,” IP WATCHDOG (Apr. 6, 2011), <https://www.ipwatchdog.com/2011/04/06/increasing-allowance-rates-by-selectively-targeting-patent-class/id=16283/>.

87. Laura R. Ford, *Patenting the Social: ALICE, Abstraction, & Functionalism in Software Patent Claims*, 14 CARDOZO PUBLIC L., POLICY, AND ETHICS J., 259, 280 (2016).

88. *Id.*

89. *Id.*

90. *Id.* at 282.

91. *Id.*

92. Larissa Katz, *Exclusion and Exclusivity in Property Law*, 58 U. TORONTO L. J. 275, 275 (2008).

93. Ford, *supra* note 80, 284.

94. *Id.* at 289.

95. *Id.* at 290.

96. U.S. PATENT AND TRADEMARK OFFICE, JULY 2015 UPDATE: SUBJECT MATTER ELIGIBILITY, 4-5.

97. Ford, *supra* note 80, 314.

Considering ethical design as a requirement for patentability would significantly lessen the opportunity for tech giants to develop and SNSs to integrate harmful, addictive technologies with the potential to influence human emotion and behavior. The USPTO presently acknowledges that inventions that are “offensive to public morality”⁹⁸ will be denied patent protection; so, the expansion to include ethical design as a requirement for patentability is not ludicrous. When harmful technologies are still patentable, regardless of their inadvertent influence on users, what is compromised are constitutional commitments to “vision[s] of human dignity, freedom, and legal equality” as seen through the First, Fifth, Thirteenth, Fourteenth, and Fifteenth Amendments.⁹⁹ This constitutional commitment is sacrificed for economic growth.¹⁰⁰ It is this subsequent commitment to economic growth that has positioned us in a place where we are unable to place “rationally defensible” boundaries around this technology.¹⁰¹ By requiring ethical design as a requirement for patentability, developers of this technology would be barred from patent protection for these harmful technologies, thus limiting the integration of such technologies on SNSs.

IV. CONCLUSION

The loudest critics of the technology behind SNSs, many of which participated in the early design, development, and strategy behind such technology, now realize the harmful effects that can be had on humans and the future consequences.¹⁰² In the present, a more ethical design to SNS tech may be necessary to prevent the growth of the power and influence SNSs have on their users. Because of the lack of state or federal-level legislation preventing the use of such technologies, tech giants are able to seek protection for social network patents. With support behind proposed legislation falling short and a disinclination to revive the moral utility doctrine in contemporary patent law jurisprudence, an expansion of patentability requirements to include ethical designs as they relate to social network patents may be necessary to combat the harmful effect of technologies implemented by SNSs.

98. 35 U.S.C. § 101.

99. *Id.* at 338.

100. *Id.* at 340.

101. *Id.*

102. Jeff Orlowski, *The Social Dilemma* (2020).