

**UNDERMINING DOPAMINE DEMOCRACY THROUGH  
EDUCATION: SYNTHETIC SITUATIONS, SOCIAL MEDIA, AND  
INCENTIVE SALIENCE**

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ABSTRACT: Engagement with electronically mediated information, such as participation with social media, often provides the illusion of democratic freedom. In actuality, social media, as it exists within a neoliberal context, provides what I refer to as *dopamine democracy*, which entails the appearance of democratic choice that is actually uncritical choice brought about through incentive salience. In order to combat dopamine democracy and neoliberalism, I argue that Dewey's conception of education should be used as a tool by which to utilize technological innovation in order to foster democracy.

*"The spread of literacy, the immense extension of the influence of the press in books, newspapers, periodicals, make the issue peculiarly urgent for a democracy. The very agencies that a century and a half ago were looked upon as those that were sure to advance the cause of democratic freedom, are those which now make it possible to create pseudo-public opinion and to undermine democracy from within."*

(Dewey 1916, 168)

In her presentation to the annual meeting of the *Society for the Study of Symbolic Interactionism* in 2008, Karin Knorr Cetina proposed the concept, *synthetic situation*, to describe "electronically transmitted on-screen projections that add informational depth and new response requirements to the "ecological huddle"" (Knorr Cetina 2009, 61). Her presentation provided a useful terminology for understanding types of situations mediated through on-screen projections and their phenomenological significance. The synthetic situations that she described have provided tools for understanding engagement with electronic media, especially those media that are highly interactive. The general tools Knorr Cetina presented are useful for critically assessing the significant effects pertaining to electronic media, neurochemistry, and socio-economics. In particular, synthetic situations are useful for understanding and critically assessing the effects of

neoliberalism upon conceptions of autonomy, moral responsibility, and freedom within the ecological huddle that has become dominated by interactions with and through electronic media.

I use the phrase *dopamine democracy* in order to capture the combination of neoliberalism and electronic media as it affects, *inter alia*, the dopaminergic systems of individuals. Dopamine democracy refers to a general system or pattern of behavior in which persons are generally of the belief that they make free choices that directly contribute to governance, even though choices are actually directed by *incentive salience*, or the immediacy of wanting and seeking, without critical reflection or deliberation. This system or pattern is facilitated in large part by synthetic situations that fit within a larger neoliberal system. The interplay between the synthetic situation and neoliberal ideology reciprocally reinforces a guiding belief that persons are atomistic individuals who act independently from one another. The illusion of free choice within dopamine democracy is facilitated by a market of options that increases via electronic media and the synthetic situations provided by such media. The effect of this illusion is corresponding reinforcement of atomistic individualism that undermines possibilities for community that might otherwise be fostered through synthetic situations.

John Dewey was prescient regarding technological and socio-economic transformations and their effects upon systems of value, which include conceptions of autonomy, moral responsibility, and freedom. In the following, I argue that Dewey's conception of education is useful for addressing synthetic situations as liberating and constructive for community-building, and that it replaces atomistic individualism and market-thinking of neoliberalism that has contributed to dopamine democracy with actual democratic habits. Dewey's analysis of technology and socio-economics provides a remedy for the increasing atomistic individualism that is concomitant with a loss of freedom obfuscated by dopamine democracy. I argue for a critical assessment of dopamine democracy, especially as it pertains to synthetic situations, which implements concepts of education as

proffered by Dewey. First, I describe neoliberalism and its connection to dopamine democracy. Second, I explain Knorr Cetina's concept of synthetic situations, expanding upon it as it provides insight regarding dopamine democracy and atomistic individualism. As an example of synthetic situations and their role in dopamine democracy, I use the example of social media. Third, I apply criticisms that Dewey provided pertaining to autonomy, individualism, and socio-economics, as well as technological changes and how these changes relate to information and conceptions of personhood. Finally, I suggest reconsidering the ontology of personhood in accordance with Dewey's conception of education, which entails utilizing synthetic situations to undermine atomistic individualism and neoliberal thinking.

#### **Neoliberalism and Dopamine Democracy**

Neoliberalism generally refers to an ideology associated with politics that is guided primarily by economic considerations. According to David Harvey, "It holds that the social good will be maximized by maximizing the reach and frequency of market transactions, and it seeks to bring all human action into the domain of the market" (Harvey 2005, 3). An arbitrarily free market subordinates political and social considerations so that economic value precedes all other values. *Homo oeconomicus* replaces *homo politicus* (Foucault 2004/2008). Capitalism and democracy are wed within neoliberalism in such a way that capital dominates all aspects of life as consumerism and personal choice are presented as *democratic* choice. Driven by enterprise, neoliberal systems operate as complex, multidimensional markets. Individuals occupy these multiple dimensions. Their personal interactions within markets provide the appearance of democratic choice, as well as the presumption that each individual is an atomistic free agent, bound only by monetary constraints, which are considered primarily determined by the wants and efforts of each individual alone.

Participation in the market-driven environment perpetuates and reinforces the belief that persons are atomistic entities who only form communities through some form of aggregation. The myth of the individual that is fostered by market thinking helps sustain the appearance of democracy and democratic choice that obfuscates the driving force of capital that subsumes individuals and communities. A seemingly endless array of consumer choices, including products, feelings of anticipation and temporary fulfillment, and the assumption of self-value connected to the processes of wanting and seeking, all fuel dopamine democracy. Synthetic situations within a neoliberal system – a system that gives precedence to economy over all other considerations – magnifies and strengthens dopamine democracy at the expense of educated citizenry and community participation.

#### **Synthetic Situations and Individualism**

According to Knorr Cetina, synthetic situations are environments "augmented (and temporalized) by fully or partially scoped components – in which we find ourselves in one another's and the scopic components' response presence, without needing to be in one another's physical presence" (Knorr Cetina 2009, 69). Scopic systems, which comprise synthetic situations, are arrangements "of hardware, software, and human feeds that together function like a scope: like a mechanism of observations and projection, here collecting, augmenting, and transmitting the reality of the markets" (64). Synthetic situations multiply experiences of market choice beyond those that are only *local*, which Knorr Cetina defines as "witnessable" through the senses, "as opposed to imputation or inference" (63). Participants in synthetic situations are required to transition between scopic electronic contexts and non-electronically mediated local situations. Unlike local situations, synthetic situations allow for global activity that transcends provisional limitations of space and what

might be considered traditional time sequences. Alterations and variations of temporal and spatial considerations are evident in market transactions and with regard to conveyance of information. "Streams run at different speeds: prices may change within split seconds, analysis and headline news trickles in more slowly and is reiterated repeatedly, transaction records nearly match the speed of transactions" (71). Knorr Cetina divides synthetic situations into four types that are defined by the relation between scoped reality and what she refers to as the "physical world" or "physical elements" (67).

The first type of synthetic situation is that of market traders who occupy the same physical space, but are primarily engaged with information on screens. Their interaction with the representation of market information scrolling down the screen is primary, while interaction with other traders within the same office space is secondary. This is similar to engagement with other forms of online markets, such as retail sites. The second type of synthetic situation is one in which persons interact face-to-face, but their surroundings are synthetic. The effect of the second type is similar to that of using a blue screen behind actors in order to place them into various situations that are not part of their local physical world. The third type is one in which synthetic components feature in the situation, but are not primary. An example of this situation is one in which people interact within a physical space (such as an office or library) while periodically referencing information on a screen (such as a handheld device or laptop computer). The fourth type of synthetic situation is one in which persons interact through a "telepresence," such as through a video conference (68). All four of these types of synthetic situations expand the scope of interaction beyond the local. Within the context of neoliberalism, all four types of synthetic situation are driven primarily by economic considerations and function as parts of markets.

By providing interactions beyond the local physical world, synthetic situations within a neoliberal context multiply sources for market choices, anticipations, momentary fulfillments, and arbitrary freedoms that are associated with dopamine democracy. This is especially true in the first type of synthetic situation, which includes most social media interactions. Synthetic situations are not inherently connected to dopamine democracy, but because of the dominance of neoliberal ideology that drives the context in which they are used, persons tend toward atomistic individualism and corresponding false conceptions of autonomy. In his work on freedom, education, and politics, Dewey provides useful criticisms of this type of individualism perpetuated by the marriage of a particular type of socioeconomic ideology with technological innovation. Before applying these criticisms, reviewing what technology is and how certain synthetic situations pertain to particular instances of dopamine democracy is helpful for understanding problems within the current neoliberal context.

Technology is here to be understood in accordance with the pragmatic definition Larry Hickman supplies. "Technology [...] involves the invention, development, and cognitive deployment of tools and other artifacts, brought to bear on raw materials and intermediate stock parts, with a view to the resolution of perceived problems" (Hickman 2001, 12). This definition is important for understanding synthetic situations as having value only within the context of use. There are no synthetic situations *in-and-of-themselves*. As Hickman goes on to state, "Technology in this sense is what establishes and maintains the stable technical platforms – the habitualized tools, artifacts, and skills – that allow us to continue to function and flourish" (12). Synthetic situations consist of habitualized tools, artifacts, and skills that enhance the ability to function within an environment. When that environment is a neoliberal one, flourishing is undermined by the precedence given to market values. Synthetic situations then tend to

undermine the ability of persons to flourish, as they are used to solve problems of markets, not problems of persons.

Personhood is considered atomistic within a market-driven environment. Persons are defined as individual biological entities (human bodies), desiring entities (consumer bodies), and individual enterprises (corporate bodies). Value is determined by that which increases capital within markets; all else, including flourishing, is subsumed under the values determined within markets. Individual atomism is presumed and perpetuated within dopamine democracy as the guiding ontology of personhood. The myth of the individual provides support to the veil of dopamine-driven democracy that thinly obfuscates corrosion of personhood and community in the wake of capital's primacy.

Synthetic situations increase the power of capital over that of persons within dopamine democracy by increasing the availability of products, the opportunities to seek those products, the appearance of increased choices, the barrage of feelings of anticipation, and the fleeing fulfillment concomitant with consumption. The expanse of the local into the global within a neoliberal system entails an increase of markets and the subsumption of persons within those markets. All becomes part of a larger network of markets. Even within social media contexts that are not explicitly market-driven, markets still dominate and foster a dopamine democracy within a neoliberal environment.

Social media, such as Facebook and Twitter, are exemplary as synthetic situations that, within a neoliberal context, perpetuate dopamine democracy despite not being overtly designed for the purpose of monetary exchange for goods or services. Social media is primarily a platform designed to facilitate communication of information between parties through the first, third, and fourth types of synthetic situations. Because the synthetic situations are within a neoliberal context, they do not merely provide means for communication. Rather, social media becomes a multi-

faceted market that intersects with other markets. Facebook, for instance, becomes a marketplace of likes, comments, and shares. Twitter becomes a marketplace of likes and retweets. Communication of information is absorbed by quantification of symbolic capital – the number of likes, for instance, or the status of the person retweeting another's information – and becomes secondary as feelings of wanting, anticipation, and temporary reward become reciprocally connected to the value of activity and self. Just as neoliberalism entails the economization of the political, it also entails the economization of the social, wherein market principles are applied within nonmarket fields (cf. Brown 2015, 158). Within the synthetic situations of social media, this is where dopamine combines with what takes on the guise of democratic choice.

There are multiple neurochemical systems implicated in the processes of liking, commenting, and sharing within social media activity. For instance, the opioid, endocannabinoid, and GABA-benzodiazepine neurotransmitter systems are all involved in the pleasure associated with making choices. According to Berridge et al. these three systems are specifically connected to 'hedonic hotspots' that "are capable of generating increases in 'liking' reactions, and by inference, pleasure" (2008). The mesolimbic dopaminergic system has greater influence on motivation, especially with regard to wanting and reward, embodied in the seeking activities. Seeking is directly influential to attention, wanting, and anticipation (Alcaro et al. 2007). The type of wanting specific to the dopaminergic system does not require awareness – cognitive expectation – or particular long-term goal-seeking, but is rather *incentive salience*, which is focused on the immediacy of reward-related stimuli or objects of gratification. Incentive salience has been linked with the irrational wanting associated with addiction, wherein the desire is not for something cognitively wanted (what Harry Frankfurt calls *second-order volitions*), but is desired regardless of a cognitive want (Berridge et al. 2008; Frankfurt 1971). Synthetic

situations within social media, such as liking, sharing, and commenting on Facebook, are linked to both pleasure and to incentive salience, but it is the dopaminergic activity – the reinforced feelings of focused attention, incentive salience, and anticipation of pleasure – that are especially surreptitious within a neoliberal context in terms of democratic choice. What appear to be choices brought about by cognitive want are in fact irrational choices motivated by incentive salience.

Reinforced dopaminergic activity that is increasingly focused on wanting and seeking immediate gratification resembles the same addictive behavior associated with substance abuse and other forms of addiction. Although synthetic situations within social media might otherwise be utilized for community-building through increased, global communication afforded by the expanse from the local environment, social media within a neoliberal environment breeds atomism in which individuals are further separated from one another as they are subsumed by markets. Addiction to wanting and seeking associated with markets of social media comprises what Henry Giroux has described as “a narcissistic hyper-individualism that radiates a near sociopathic lack of interest in – or compassion and responsibility for – others” (Giroux 2014, 9-10). Despite being connected globally through synthetic situations, individuals are largely disallowed from forming communities. In fact, synthetic situations that perpetuate dopamine democracy foster the contrary of communitarianism. Individual choice that is meant to fulfill wanting and seeking overrides all else in a market of incentive salience and consumption. This activity is driven by incentive salience more than that which is cognitively wanted, i.e. wanted in a deliberative, critically reflective manner, yet parades as a form of democratic choice. The addictive cycle of likes, sharing, retweeting, and commenting appears as a process of individual, free, and informed choice that occurs within a democratic arena provided by synthetic situations, but the arena is a

marketplace in which the participants are led by anticipation – the endless seeking for fulfillment. The *demos* does not direct, but is rather directed by its dopamine addiction masked as a form of freedom.

### Technology and dopamine democracy

Synthetic situations are by no means the sole source of dopamine democracy as it is perpetuated via social media. Technological innovation is benign until put to use within a specific context or environment. Dewey is apt in his analysis of technological information and its interplay with concepts of freedom, autonomy, and community. He indicates that experience is always transactional, taking place between those who are part of a specific environment and that which constitutes the environment of which those persons are a part (LW 13, 25). For Dewey, that which is technological is part of the environments of which persons engage. Technology is part of what Dewey refers to as *the state of culture*. The state of culture includes the interactions of many factors, not simply the technological, “the chief of which are law and politics, industry and commerce, science and technology, the arts of expression and communication, and of morals, or the values men prize and the ways in which they evaluate them; and finally, though indirectly, the system of general ideas used by men to justify and to criticize the fundamental conditions under which they live, their social philosophy” (LW 13, 79). The technological is not a phase or set of artifacts or practices that is in isolation from politics or socioeconomic factors, but rather interacts with them as part of the state of culture. According to Dewey, technological innovations, especially those that are media for communication, shape the sentiments of those who utilize such media, often through the interplay of emotions and imagination more than information and reason (LW 13, 70). Tools that provide greater availability of information also provide greater influence of the political and socioeconomic values that

are part of the same state of culture. Dewey foreshadows synthetic situations provided by current tools of communication when he states, “Today the influences that affect the actions performed by individuals are so remote as to be unknown” (LW 13, 94).

Because synthetic situations are within a state of culture that includes neoliberal values as primary, the economization and atomization of individuals comes to dominate most synthetic situations. Individualism, as Dewey points out, is a product of a particular type of state of culture (LW 13, 77). Neoliberalism is an extreme form of cultural condition that perpetuates extreme atomization of individuals from one another as if such differentiation was the natural state of the world. Not only is atomization of personhood emphasized through synthetic situations within a neoliberal state of culture, but there is overemphasis upon activity – specifically the incentive salience activity of wanting and seeking – as an end. Such overemphasis, especially in contrast to critically reflective, i.e. intelligent, activity, identifies “freedom with immediate execution of impulses and desires” (LW 13, 45). Within a neoliberal environment, the immediacy afforded by synthetic situations is mistaken for intelligent free choice. Individualism is concomitantly presumed to be the ontology of personhood that captures the natural state of being.

Dewey’s criticisms of individualism presumed as the natural state of being indicate that an implicit ontology of personhood is contingent upon surrounding beliefs and practices. One of the greatest dangers of the atomization perpetuated by synthetic situations within a neoliberal environment is that the resulting conception of personhood is contradictory to actual democracy, to which dopamine democracy pays lip service, but undermines. Dopamine democracy undermines the possibility of persons actually engaging in democracy because atomization disallows communities of persons, which sustain and perpetuate democracy through educative processes. Education is stifled, in part, by the

prevention of community formation fostered by the atomization of individuals via synthetic situations. In order to preserve and foster communities and education that facilitate democracy, sacrificing synthetic situations is unnecessary. Rather, synthetic situations may be reconfigured in tandem with reconsidering and reconstructing the contexts in which synthetic situations exist. One way to do this is to undermine neoliberalism and its concomitant ontology of personhood.

### **Education, democracy, and personhood**

The philosophy of education as proposed by Dewey is a useful tool for undermining dopamine democracy because, *inter alia*, it provides an ontology of personhood that supplies individuals with the means by which to engage in critically reflective democratic action rather than merely engaging in incentive salience parading as democratic choice. His philosophy of education also provides guidance for how to utilize synthetic situations as tools to facilitate democracy instead of perpetuating neoliberal conceptions of persons as primarily economic and atomistic agents. Dewey’s conception of education is rooted in the idea of freedom as intelligent observation and judgment that contributes to self-control (LW 13, 46). Education focused on intelligent observation and judgment contributes to the development of individuals as free persons through facilitating intelligent habits of desire and imagination, and cooperative character contributes to the development of persons as free within a society. Dewey states that individualistic, competitive economic systems, such as neoliberalism, undermine education and the formation of character (LW 9, 186-191). In order to overcome the antagonism inherent to neoliberalism, education must aim toward developing persons as cooperative within a community. According to Dewey, “A society that is largely held together by the aim of many individuals to get on as individuals is not really held together at all. Changes occur with breathless

rapidity, but they have little organization and next to no centre and unified tendency" (LW 9, 179). Personhood may be possible in such an individualistic system, but it remains fragmentary at best. By making freedom and community engagement through cooperation the aims of education, persons can flourish as democratic rather than as mere agents of incentive salience.

Dewey defines education as "reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience" (Dewey 1916, 77). Education is a process by which persons are developed as critical thinkers capable of engaging in reconstruction and reorganization, cognitive deliberative activities that contribute to democratic action. As Dewey states, "democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience" (87). Part of democracy, according to Dewey, is that each individual considers others when deliberating and acting upon deliberations. The type of education necessary for democracy is one that provides individuals with personal interest in community, not merely in competition and material gain (99). Education that develops social sympathies facilitates widening the arenas of choice beyond wanting and seeking to include reflective decision-making and consideration (148). Democracy undermines neoliberalism through education that includes considerations of social responsibility, not merely training concerning individualistic or strictly economic gain. Education for democracy includes issues concerning persons living together in communities, "where observation and information are calculated to develop social insight and interest" (192). By educating so as to facilitate free and socially responsible thought, neoliberalism may be supplanted in order to replace dopamine democracy with actual democracy. Actual democracy is based in intelligence, imagination, and community, whilst dopamine democracy is rooted in incentive salience. Synthetic situations, which

perpetuate dopamine democracy within a neoliberal environment, may be utilized to perpetuate free and socially responsible thought within a democratic context, or they may be utilized in such a way so as to undermine neoliberalism and pave the way for democracy.

Synthetic situations may facilitate global communication rather than incentive salience if they are reconstructed to perpetuate democracy through education rather than neoliberal values through dopamine democracy. Communication facilitates community and personhood. By removing those aspects of synthetic situations that perpetuate neoliberalism, such as elements that give primacy to capital over personhood and place economic activity over and above intelligent and imaginative activity, i.e. above those activities facilitated by education, synthetic situations may help undermine dopamine democracy. Removing elements of synthetic situations that foster divisions based upon consumerism and incentive salience provides a means by which to increase the *social efficiency* of persons. Focus on communication, over and above economics, facilitates "breaking down the barriers of social stratification which make individuals impervious to the interests of others" (Dewey 1916, 120-121). Just as synthetic situations within a neoliberal context contribute to individualism and ethical atomism, they may also be useful, when aimed at facilitating education that helps form and sustain democratic communities and persons, for providing means by which to build communities on a global level. Democratic habits, such as critical reflection and social sympathy, may come to replace bad habits – those "habits so severed from reason that they are opposed to the conclusions of conscious deliberation and decision" (1916, 49). The habits of synthetic situations of dopamine democracy are "habits that possess us instead of our possessing them, are habits which put an end to plasticity. They mark the close of the power to vary" (1916, 49). Synthetic situations are better utilized to contribute to what Dewey calls "general education" by which



possibilities for interaction are broad and flexible; social relationships are truly fostered and diverse (1916, 67). This is contrary to the echo chamber effect of dopamine democracy through which individuals only seek out interactions that are already agreeable to their incentive salience. Such incentive salience only breeds more wanting and seeking of immediate satisfaction without critical reflection. Keith W. Campbell and Jean M. Twenge have referred to this isolation with regard to beliefs, especially in connection with esteem and status, as a *narcissistic cocoon* (2015, 366). This leads to one of the most dangerous sides of dopamine democracy: the thoughtless polarization of socio-political ideology that is perpetuated by the dominance of incentive salience within synthetic situations. Completely removing the mechanisms within synthetic situations that facilitate and perpetuate incentive salience is likely an impossible task, especially given the rapidity by which information is made readily available. Iterative steps that incorporate critical assessment and reconstruction of synthetic situations are necessary to move beyond incentive salience and toward democracy.

### **Conclusion**

The next step in replacing dopamine democracy through educative means is to analyze the interaction of synthetic situations, socio-political decision-making and neurobiological bases of behavior. I suggest implementing a strategy of neuropragmatism as advocated by Tibor Solymosi. Neuropragmatism takes “seriously the insights, tools, and techniques developed by the neurosciences as achievements in a living context of growth” (Solymosi 2011, 356). Neuropragmatism provides a fallibilist stance from which to assess information concerning synthetic situations, especially with regard to how these situations affect and are affected by neuroscientific considerations. In order to alter synthetic situations and the way in which they are engaged, I propose using neuroscientific analyses, such

as those provided in *The Wiley Handbook of Psychology, Technology, and Society* (e.g. “Narcissism, Emerging Media, and Society”) (2015), and applying the findings to education, especially as pertaining to synthetic situations and the development of democracy. Within neoliberalism, synthetic situations have provided access to information in such a way that there is little connection to critical assessment or fallibilism. Incentive salience is thoughtless. As Dewey states, “And information severed from thoughtful action is dead, a mind crushing load. Since it simulates knowledge and thereby develops the poison of conceit, it is a most powerful obstacle to further growth in the grace of intelligence” (1916, 153). Combining neuroscientific studies with Dewey’s conception of education provides a set of tools by which synthetic situations may be transformed from perpetuating dopamine democracy, reinforcing neoliberalism and individualism, to fostering democracy and community through providing education that forms critically reflective, intelligent, and imaginative persons.

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