The Social Function of Museums in the Digital Age

Susana Smith Bautista

The Social Function of Museums in the Digital Age

Susana Smith Bautista, University of Southern California, California, USA

Abstract: Museums of the 21st century play a central role in decreasing knowledge gaps and in leveling knowledge due to increased opportunities for participation, entertainment, and motivation offered by new digital technologies, but there may be a hidden benefit for maintaining knowledge gaps. In 1970, Tichenor, Donohue, and Olien proposed their knowledge gap theory that sought to explain how people acquire information differently, resulting in a gap in the amount of knowledge separating those of higher and lower socio-economic status. Despite the multifunctional and populist approach of modern museums, most people still expect to learn something new from their visit; they hope to increase their cultural capital or fill their knowledge gap. Museums are seeking creative ways to communicate art and their expert knowledge to all visitors, who are encouraged to construct their subjective interpretations from information provided by the museum, but also to seek new information and aesthetic experiences on their own. Art museums represent the vanguard of originality and creativity in our society, yet their established role provides a necessary balance and anchor to the uncertainty and anxiety often associated with contemporary art, and with our rapidly changing digital society that presents an abundance of knowledge and opinions. The important question is whether this popularization of knowledge is a means for museums to maintain the gap necessary to preserve their hierarchical status and power, or whether it motivates and empowers visitors to learn enough to close that gap and deconstruct the institutional power structure. Perhaps the real goal should not be to close the gap and have everyone possess the same knowledge, but to inspire individuality in the interpretation and performance of knowledge.

Keywords: Museums, Art, Knowledge Gap, Motivation, Digital Age

MUSEUMS OF THE 21st century strive to be more than a repository of valuable objects. They are social centers for the community providing entertainment and family activities, they are respites from the chaotic world we live in, and they are cultural experiences where the visitor can be a passive or active participant. Yet despite this multifunctional and populist approach of modern museums, most visitors still expect to learn something new; they hope to increase their cultural capital and fill their knowledge gap. In 1970, Phillip Tichenor, George Donohue, and Clarice Olien, all from the University of Minnesota, proposed their *knowledge gap theory* that sought to explain how people acquire information differently, resulting in a gap in the amount of knowledge that separates those of higher and lower socio-economic status.

This paper will describe how public perceptions and expectations of the elite institution of museums have remained intact despite the largely populist approach in museums. The abstract and ambiguous nature of modern and contemporary art, in particular, calls for an anchor point to navigate the multitude of interpretations now presented to the public due to their populist stance as well as the affordances of digital technologies they have incorporated. Recent pedagogical museum practices tend to offer more questions than answers, which often

COMMON GROUND

leaves the public feeling lost and anxious. There is now an abundance of objective knowledge, facts, and opinions (scholarly, artistic, and lay) from which to form subjective opinions, yet visitors often need help in this challenging process. As such, in the face of tremendous change attributed to the digital age, the museums' fundamental hierarchical structure and established position have remained constant.

The work of Jean Piaget and his theory of constructivism will be referenced in discussing the participatory museum experience today, and Pierre Bourdieu's ideas about culture as a source of domination will shed light on the persuasive power of museum knowledge. Four noteworthy studies will demonstrate how skills and medium also affect the gap. Berger and Calabrese's (1975) *uncertainty reduction theory* is useful for understanding the anxiety which often occurs when visitors are confronted with contemporary art. Albert Bandura's concept of *self-efficacy* and Daniel Berlyne's theory of *epistemic curiosity* will be used to suggest methods for museums to help all visitors gain knowledge, thereby decreasing the knowledge gap, if that is the goal.

The Knowledge Gap

The general hypothesis of the knowledge gap theory may be explained as follows: "As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease" (Tichenor et al. 1970, 159-160). Tichenor and his colleagues surmise that increased formal education leads to greater exposure of mass media content, greater awareness of the content, more accumulated knowledge of the content, and more of an interest in the content. They list five factors that contribute to knowledge gaps: higher reading and comprehension abilities necessary to acquire knowledge (communication skills); a greater amount of stored information or existing knowledge resulting from prior exposure; relevant social contact in which to discuss issues; selective exposure, acceptance, and retention of information congruent to existing beliefs and values (attitudinal selectivity); the nature of the mass media system that delivers information.

The theory suggests that the particular medium may be a contributing factor, drawing assumptions about how education levels are correlated with certain media; print media being more heavily used by higher socioeconomic status persons. Compared to newspapers, television use tends to be less correlated with education, perhaps because of its visual nature, easy access, and content that is entertaining, more sensational, and briefer. For this reason, they suggest that television may act as a "knowledge leveler" (Neuman 1976, 170). Similarly, Shingi and Mody (1976) proposed the *communication effects gap hypothesis*, stating that the medium of television can level previous inequities. Eveland and Scheufele's 2000 study also support these assertions, finding that "the relationship between education and knowledge is weaker among heavy television news viewers than among light television news users" (223). This relationship may be explained by television's ceiling effect, which limits the amount of information that can be added to an individual's pre-existing knowledge. Ettema and Kline (1977) also cited ceiling effects as a major causal factor of knowledge gaps. The concepts of communication medium and ceiling gap are fundamentally important to this study of museums in general because, like television, most art exhibitions are based on visual communication and strive to be entertaining.

Also relevant to this analysis is the work of Brenda Dervin and her *intraindividual cognitive gaps model* (Gaziano and Gaziano, 127). Where Tichenor et al. originally focused on differences between social strata, and Shing and Mody, Eveland and Scheufele, and Ettema and Kline all focused on the communication medium and its process of message transmission, Dervin focuses on differences in individual cognitive processes. Dervin (1980) believes that the key to understanding knowledge gaps lies within the construction of meaning between the senders and receivers of information, which is a cognitive process. Dervin does not use the term knowledge, but instead refers to "sense-making" or meaning making. She suggests that individuals are active and creative in this cognitive processing of messages. The problem with applying this model to art museums, however, is that Dervin de-emphasizes the role of the message source and does not consider the role of affect in the interpretive process.

The Construction of Knowledge

French sociologist Pierre Bourdieu (1984) notes that differences in people are not based on knowledge acquisition, but rather on social distinctions. He states that individual taste functions to create social distinctions and is an acquired "cultural competence," which is itself a factor of education. Cultural competence or capital is a personal asset, generally acquired outside the official educational system and strongly correlated with social class. Bourdieu cites two distinct systems of social hierarchization in modern society; the first is economic based on money and property, the second is cultural based on cultural capital. Bourdieu distinguishes between highly legitimate areas (music, painting, fine arts) and lower legitimate areas (middle-brow art, popular culture), where age seems to be a more important factor than education. Museums are a key institutional player in the provision of (high) cultural capital, which is a factor of not only their intrinsic hierarchy, but also of their power. Bourdieu notes that culture is a source of domination by intellectuals that are the specialists of cultural production. Museums support cultural production, they give it a space for public viewing, and they determine what is tasteful. Museum stores sell cultural capital to take home and display proudly, or to give as gifts that show off your cultural competence. They sell reproductions of paintings and other objects, beautiful coffee table books and also highly specialized books to satisfy quests for greater knowledge.

Museums and fine arts institutions function collectively in their charge to determine socially accepted notions of taste, presenting opportunities to acquire their cultural capital. Museums determine which artists are qualified to have their art exhibited, who are the appropriate scholars to write and talk about them, and what are the salient issues surrounding these artists and artworks. Museums frame the discussion much like the mass media frames critical issues during an election period, usually a factor of decisions made by the gatekeepers in power. Museum curators act much like journalists who have intimate knowledge about certain subjects, and museum directors are like the editors who make final decisions, placing events and exhibitions within a larger field of meaning.

Yet museums and arts institutions are not the only ones that serve as arbiters of taste. Often these institutions act in the service of the government, which can be the ultimate gatekeeper and arbiter. Donna Binkiewicz (2007) writes about the beginnings of the National Endowment of the Arts (NEA) from 1965 to 1975, and how its aesthetic preferences represented the conservative status quo rather than the liberalism of Presidents Kennedy and Johnson. While Johnson inherited this program from Kennedy, he appointed his own members rather than

the ones originally targeted by Kennedy, which were more artistically diverse. The first members were all abstract modernist artists (or scholars who supported this current style), that in turn actively solicited applications from artists and organizations that also supported their aesthetic preferences. The NEA's Art in Public Places Program sponsored major public artworks, large-scale public murals, and a print workshop to reproduce artworks, all in the modernist style, and distribute them to small museums and schools. The NEA supported Abstract Expressionism (a modernist movement), which came to be seen as the symbol of American free expression; it was apolitical because of the safe subject matter, and many of the artists were émigrés who left Europe after the Second World War. By upholding this form of high art, the government aspired to both promote democracy and provide a social benefit.

During this formative period of the NEA, many large museums collaborated with the government in return for substantial financial support. In his 1985 essay, *The Museum in the City*, Mark Lilla bemoans how museums are run by an economic elite that is not necessarily a cultural elite. This fact is largely true, however it is nothing new. Museums, at least the large ones, have long been run by corporate leaders as trustees, they depend on corporate sponsorship, and they often make decisions based on economics. Most notably, the Museum of Modern Art (MoMA) in New York has been strongly influenced by the Rockefeller family since its inception. Nelson Rockefeller was very politically active, especially in the area of foreign affairs, first as governor of New York for fourteen years and then as vice president under Gerald Ford. When the US government formalized a partnership with MoMA in the 1950s to begin organizing art exhibitions intentionally aimed at foreign audiences (part of Cold War cultural diplomacy), Nelson helped to form the museum's International Council, personally coordinating efforts with the government.

While knowledge and taste may be constructed by the elite gatekeepers of museums and the state, how is the museum perceived by the average visitor? How can they distinguish between scholarly information and commercial marketing or propaganda? Visitors today are encouraged to form their own opinions and interpretations and even to share them publicly, but this is a daunting task for most, save the sophisticated, confident visitor. Novice visitors learn the rules when they encounter the visitor entrance desk upon entering, they learn from observing other visitors, from security guards, and from taking gallery tours, reading wall text, and gallery guides. The more often that a visitor frequents a museum, the more confident he/she will become in the rules and in the process of knowledge construction within the museum.[1] Anxiety and uncertainty will become reduced, and he/she will gain the self-efficacy and motivation necessary to make the critical transition from passively observing and understanding, to actively participating and seeking knowledge. For this reason, museums devote extensive resources to community outreach programs that bring families from lower socio-

---

[1] In 2007, the author conducted a quantitative analysis of 70 contemporary art museum visitors to determine if exhibition syntax (chronological and thematic) was a factor of their perception of narrative. One hypothesis stated that museum visitors will perceive narrative in art exhibitions differently with respect to age, gender, educational level, and familiarity with museums. Of the four predictor variables, the only significant regression coefficients were between narrative and familiarity with museums (β = .32, SE = 2.79, p = .01), and between fidelity and age (age (β = .27, SE = 10.84, p = .024). Gender and level of education did not demonstrate significant positive relationships to perceiving narrative. Familiarity with museums was measured by the number of times the participant visited a museum in the past year. A correlation can be made between age and familiarity because of the cumulative effect of visiting museums over a long period. The findings show that the more a visitor is familiar with the particular modes of communication used by a museum, the easier it will be to perceive its intended messages.

economic areas to visit the museum for the first time, usually on weekends with music and fun activities, and they encourage repeat visits by offering exclusive events to their members and special groups.

The Populist Museum

Swiss psychiatrist Jean Piaget's cognitive theory of *constructivism* (1929) proposes a model of active learning and construction of knowledge, not one of passive reception of transmitted knowledge. The popularity of this theory has recently reemerged in museum studies as museums accept the need for visitors to actively create in order to generate lasting learning experiences based on self-reflection and individualization.[2] Despite curatorial intention regarding a desired exhibition narrative that signifies a predetermined script and path, museums acknowledge that visitors usually create their own path within the exhibition, leaving with either a partial narrative or entirely different meanings and experiences. Piaget saw the role of the teacher as creating the conditions for invention rather than to provide ready-made paths and knowledge.

Since the early 19th century, museums have incorporated pedagogical practices into their permanent collections, thinking of themselves as social centers to serve the public as well as the elite educated. In the sixth edition of the *Universal English Dictionary* (1706), "museum" is defined as a "Study or Library; also a College, of Publick Place for the Resort of Learned Men" (Hunter, 1985, p. 168, cited in *Museums and the Shaping of Knowledge*, 1992, 89). Although the museum was regarded as a public place in the early 18th century, it was still reserved only for educated men, as in the utopian model of Habermas' public sphere from this same period (1962/1989). The 18th century was a period of expansionism and colonization that reinforced this elitist position among the early encyclopedic museums of imperialist nations such as England, France, and Spain. Nevertheless, these military endeavors also provoked their share of popular revolts that were both successful (American colonies) and unsuccessful (Scotland, South Africa, Ireland). For this and many other reasons, the state began to accept its duty to educate the popular masses, and the museum became the ideal vehicle for such an admirable task. Education was a likely accompaniment to the public nature of museums, but this required a division between ignorant visitors and expert curators, and a categorization of visitors.

The modern museum no longer relies on structural linear order or nationalistic groupings to maintain the hierarchical constitution of the society it embodies. At the same time, it has tried very hard to break up notions of their programs as based on elite knowledge passed down to an ignorant, passive public that needs to be molded into the ideal citizen. It is remarkable that at the very same time that the professional field of museum education was developing in the last twenty or thirty years, museums began transitioning to a two-way interaction model where knowledge and meaning is instead constructed by the visitor. Museums today recognize the "entrance narrative" that defines each individual visitor by his/her own set of beliefs, experiences, and knowledge that are ultimately responsible for constructing

---

[2] MIT professor Seymour Papert, who once worked with Piaget, took *constructivism* one step further to propose the concept of *constructionism* in the 1980s. Constructionism asserts that constructivist learning happens best when people are engaged in constructing a product, something external to them. Papert was responding to the new "constructing" applications for computers that require multimedia literacy skills to use these constructivist learning tools.

museum experiences and any derived meaning, short or long term. Yet still, intentional decisions must be made by museum staff based on presumed ideas of reception, often a result of internal visitor studies that continue to categorize visitors.

An example of a populist museum practice is the blockbuster exhibition from the 1980s. The idea of the blockbuster was taken from the film industry that often releases wildly successful movies about popular themes with massive marketing campaigns and product placement. Some of the most popular blockbuster exhibitions have focused on King Tut, Salvador Dalí, Andy Warhol, China's Terracotta Warriors, Picasso, and Van Gogh. Much like the leveling effect of television, they appeal to a broad audience that will either know these cultural giants, or at least know that they *should*. Yet at the same time, they are obligatory for the cultured crowd and an essential conversation topic at social gatherings. Blockbuster exhibitions involve large-scale corporate sponsorship and are less about scholarly research or critical interpretation; they are accompanied by large coffee table books and a remarkable array of marketing products (cultural souvenirs) in the store. From the museum perspective, blockbusters can generate new visitors, new revenue from ticket sales and merchandising, and great publicity, along with forging the image of a friendly and popular museum.

New Technologies and Old Traditions

A more recent populist practice in museums is the incorporation of new digital technologies. Museums have felt the pressure to keep current with the latest technologies for a few reasons. One is to attract and retain younger audiences (primarily the teen contingency) who are more eager for a participatory experience, more receptive to visual and audio stimuli, and more comfortable using new technologies. The San Francisco Museum of Modern Art conducted a study during its 2006 exhibition of *Matthew Barney: Drawing Restraint* to determine which interpretive devices were most frequently used by visitors, and which were most effective in helping them to make meaning. The first part of the study (n = 253) determined that visitors preferred analog to digital: 78% read the introductory wall text, 55% read the exhibition brochure, 51% used the museum's Learning Lounge, and 47% of visitors used the audio tours (including 21% audio guide headsets, 19% cell phone tours, and 7% podcasts). However, using a 7-point scale to chart visitor satisfaction from "Did not help me appreciate Barney's art" to "Helped me appreciate Barney's art," the highest mean ratings for visitors was the podcast tour (6.2) and the cell phone tour (6.0), followed by the headset audio tour with a mean rating of 5.6. The exhibition introduction wall text had the lowest mean rating of 4.7. The museum concluded that, "the more interpretive resources visitors used, the more they appreciated the art, regardless of whether they had any prior familiarity with Barney and his work" (Samis, AAM Webinar, March 11, 2008). The study also determined that 79% of visitors under 35 owned MP3 players and said they would be more likely to download a tour on their own personal device. This group rated the podcast and cell phone tour higher than the traditional audio tour with the same content because of "the ability to access information on demand, familiarity and comfort with the device and low or free cost" (Samis 2007, p. 23). As associate curator of interpretation at the museum, Peter Samis explained, "Years of museum-going and a society that processes knowledge through video apparently predisposes people to prioritize certain forms of literacy" (2007, p. 28).

To provide larger contextualization of the work and greater breadth of knowledge, museums have started adding new voices in the multimedia audio tours, such as a prominent novelist or poet, a scholar in related fields, and fellow artists. But the newest and most significant voice to be included is that of the "common" visitor. IVR technology (Interactive Voice Response) enables museums to create a centralized message system where visitors can anonymously and indiscriminately record their comments on the devices. One existing program where this feature can be found is Art on Call's Talkback feature at the Walker Art Center in Minneapolis. Museum websites also offer space for visitor comments, and on third-party sites such as Facebook, Flickr, and YouTube. The visitor is given the opportunity to produce and contribute to a centralized aggregate of knowledge, thereby creating a more significant "active" experience for the visitor and a richer supply of information for others as well. However, an unforeseen consequence of increased visitor participation is decentralization of the hierarchical museum structure, replacing the expert hegemonic voice of the curator with the equally weighted polyphony of "outsider" voices. This may not have the democratizing result praised by museums, evidenced in a more recent study for SFMOMA's 2008 exhibition on Frida Kahlo to analyze its new handheld multimedia tour. The study revealed that, "visitors most highly value listening to the artist's own voice, followed by curators and critics, then public figures and celebrities, and lastly the voice of other visitors" (Samis and Pau, 2009).

Motivation and Curiosity

All these opportunities to participate and create subjective interpretations can be confusing. James Bradac (2001) states that, "A greater number of perceived alternatives should produce a greater sense of uncertainty and a stronger drive to reduce this uncertainty" (458). Bradac defines uncertainty as, "the product of computation, based on both existing knowledge and new bits of information" (464). Uncertainty is a cognitive state, "energized by the need for cognitive closure, needing no emotional impetus for its reduction" (465). Berger and Calabrese (1975) found that with ambiguous or uncertain situations there is greater dependence on media to provide the proper information that will reduce any anxiety.[3] They concluded that it is human nature to explain the world and thus reduce uncertainty. Conclusions from the author's study and the SFMOMA study reveal that anxiety and uncertainty can be reduced by both familiarity with museums and the quantity of interpretive devices (analog and digital). Choices distinguish visitors, with teenagers preferring new media while adults prefer traditional docent tours, brochures, or wall text.

If enough uncertainty motivates individuals to seek enough information to remedy the situation, then contemporary art is the ideal motivating factor within museums. While abstract art was preferable for Cold War politicians in the US because it was sufficiently ambiguous, the ambiguity of contemporary art today motivates visitors to pursue knowledge. Largely based on sophisticated references and theoretical concepts, contemporary art is a pastiche of disparate objects and media, reaching across past, present, and the imagination. To the novice viewer – and even to the more experienced – it is not as easily accessible as other genres such as historical paintings, still lifes, portraits, works in the figurative style, photo-

---

[3] Bradac notes that affect was not a part of Berger and Calabrese's original theory of uncertainty reduction because of their "explicit disassociation of uncertainty from the concept of rewards or costs" (465).

graphy, or video. While there are certainly contemporary versions of all of these, artistic intention can be equally difficult to comprehend, as in Cindy Sherman's self-portraits or Damien Hirst's preserved animals. The populist modern museum is not worried about this ambiguity, accepting the validity of a multitude of subjective meanings which they strive to guide and encourage; however, audiences still seek to learn objective meanings and explanations.

As we see with blockbusters and new technologies, museums are finding creative ways to communicate art and their expertise to visitors, and more importantly, to help all visitors construct subjective meanings and seek new information and aesthetic experiences on their own. The important question is whether this publicly available abundance of information empowers visitors and motivates them to learn enough to close the knowledge gap, or whether it is a means for museums to maintain the gap necessary to preserve their hierarchical status and power that allow them to set standards of knowledge and taste. Visitors approach museums as a potential learning experience – cloaked in relaxation, entertainment, and socialization – and therefore bring with them an inquisitive predisposition. Museum professionals and scholars have theorized about how to best stimulate information-seeking behavior, using terms like motivation, theatricality, seduction, and arousal.

The French psychologist Daniel Berlyne (1924-1976) is central to this discussion not only because he is highly regarded for his work on affective response[4], but because of his pedagogical focus and his novel use of the *arousal model* with collative variables. Berlyne's main theory (1954, 1960) proposes that affective reaction can be measured in response to the level of arousal, as mediated by collative variables such as complexity, novelty, conflict, surprise, and congruity. The use of provocative images, questions, and statements that incorporate these variables are likely to trigger *epistemic curiosity*. Berlyne likened arousal to curiosity, distinguishing between *perceptual* curiosity (found in lower animals) and *epistemic* curiosity (a motivational condition that leads to knowledge-seeking behavior). He was most concerned with this latter type of curiosity, which can only be resolved through the acquisition of knowledge. Yet intrinsic motivation and curiosity can be negatively affected by too much uncertainty that can lead to anxiety, or too little uncertainty that can lead to boredom and disinterest.

It is also important to mention Canadian psychologist Albert Bandura and his influential concept of *self-efficacy* (1997) that can motivate behavioral change based on observational learning or modeling. His *social cognitive theory* (1986) provides a framework for understanding, predicting, and changing human behavior: how people acquire competencies and values and how people motivate and regulate their behavior for personal and societal betterment. Bandura's theory is based on modeling, which describes how people learn from symbolic environments and observation rather than as actual participants (experiential learning). Through observing what others say and do, Bandura believes we learn social behavioral norms with their rewards and punishments, thus acquiring strong motivational effects. This theory is problematic because it does not describe how to get from the stage of learning to the actual performance of learned behavior. Self-efficacy, therefore, was central in determining to what extent and under what conditions we perform learned behavior, based on a

---

[4] Affect remains our first response to a work of art and an intrinsic part of the aesthetic experience, but within the modern museum, affect also stimulates a desire for knowledge that is motivated by curiosity. According to Berlyne, curiosity is a way to measure affect but maintains knowledge as its ultimate goal.

person's confidence in their own capabilities as a motivating factor. Bandura found that if people are persuaded to believe they have the ability to succeed, they will then exert more effort in the task. Consequently, persuasion and self-perception become critical factors to motivate behavioral change. He found that social network structures are important to develop self-efficacy and also moral behavior. The interpersonal communication and transactions that occur within these networks are essential to increasing factual information, observing others that adopt positive behavior, and for social support that can alleviate stress and depression. However, Bandura states that, "social support is not a self-forming entity waiting around to buffer us. We have to go out and find supportive relationships, maintain them. It requires social efficacy to do so" (2002, 142).

While most social psychologists and communication scholars are concerned with how behavior can be changed, museums are concerned more with attracting new visitors and funders, and imparting meaningful experiences rather than changing any deleterious behavior. The focus in museums today is less on *what* information to impart, and more on *how* to instill curiosity and motivation so visitors will want to independently learn more about art, and in the process, create a "meaning-full" and lasting aesthetic experience. In 1977, Ettema and Kline attempted to modify the *knowledge gap theory* in order to place more emphasis on motivation and perceived utility of knowledge rather than socio-economic status. Similarly in a 1983 study, Ettema, Brown, and Luepker found that education-based knowledge gaps persisted when considering motivation, but that education-based knowledge gaps were smaller in the motivated group (Rucinski, 2004, 474). Museums today seek to create the appropriate environment with a wide array of options to motivate visitors to ask questions, form their own opinions, and challenge the established order (while still remaining firmly ensconced within that same established order).

Conclusion

When museums offer too much information and too many choices, combined with an ambiguous subject matter, they create uncertainty. If they present just the right amount of uncertainty, as suggested by Berlyne, visitors will be motivated to familiarize themselves with the museum environment and acquire more information. Too much uncertainty, however, will drive novice visitors to evade the situation. The challenge for museums today is to find that exact level of uncertainty for each and every visitor. The sophisticated museum visitor expects a higher level of learning and intellectual stimulation, young visitors expect new technologies and a social environment, older visitors expect traditional resources like docent-led tours and printed gallery guides, and novice visitors expect an easy entry into the museum environment with recognizable content and lots of signage. Each and every visitor not only has a different level of knowledge and a different cultural and socio-economic background, but also a different manner of inference, as noted by Sligo and Williams (2002). Peter Samis demonstrates that while visitors still prefer to use analog and traditional resources, they are not the highest rated in providing information and meaning. He favors experiential learning, like Piaget and Papert, over the observational learning of Bandura. As Samis states, "Research shows that visitor experiences are largely shaped by visitor expectations; it follows that museums themselves must alter visitor expectations by actively promoting innovative interpretive resources as an essential part of the museum experience" (2007, 31).

Despite the populist trend encouraging equal acquisition of information, Tichenor et al. suggest there is a hidden benefit for maintaining knowledge gaps; "Creations of greater differentials in knowledge across society is itself a profound social effect, and may be a central factor in future social change. To the extent that more highly educated persons are at the vanguard of social and technological change, their accelerated acquisition of mediated knowledge may be socially functional" (170). Differences are just as much a part of human society as is the desire to reduce uncertainty a part of human nature, evident in the persistent need for museums to categorize visitors. The knowledge gap compounds existing disparities and inequities in society, but perhaps the real goal should be not to close the gap and have everyone possess the same knowledge, but rather to inspire individuality of the interpretation and performance of that very knowledge. What happens to creativity and innovation if Sligo and Williams' "inferential gap" is diminished? Knowledge gaps tend to be more prominent in pluralistic communities, and modern society strives for plurality rather than homogeneity in the midst of globalization and the Internet. Museum visitors continue to be differentiated, whether by their individual cognitive processes, their affective reactions, or their preferential modes of learning that all determine how much knowledge and cultural capital they will ultimately acquire. These differences, however, are no longer as much a factor of education level or socio-economic class as during the early period of museums. The modern museum plays a central role in decreasing knowledge gaps and in "leveling" knowledge, with increased opportunities for participation, entertainment, and epistemic curiosity offered by new technologies, but it is illusionary to think that these gaps will ever be eliminated or *should* ever be eliminated. Art museums continue to serve as established agents for determining aesthetic norms within our society – as well as representing the "vanguard of social" change and creativity – providing a necessary balance and dependability to the uncertainty and anxiety associated with contemporary art and with our digital society in general.

References

Bandura, A. Social cognitive theory of mass communication. In Bryant, J. and Zillman D., eds., *Media effects: Advances in theory and research* (2nd ed.). Hillside, NJ: Erlbaum, 2002.

Berlyne, D. E. (1954). A theory of human curiosity. *British Journal of Psychology*, 45, 180-191.

Berlyne, D. E. (1954). An experimental study of human curiosity. *British Journal of Psychology*, 45, 256-265.

Berlyne, D. E. *Conflict, arousal, and curiosity*. New York: McGraw-Hill, 1960.

Binkiewicz, D. A modernist vision: The origins and early years of the National Endowment for the Arts' Visual Arts Program. In Blake, C. N., ed. *The arts of democracy, art, public culture, and the state*. Philadelphia: University of Pennsylvania Press, 2007.

Bourdieu, P. *Distinction: A social critique of the judgement of taste*. Trans. Richard Nice. Cambridge: Harvard University Press, 1984.

Bradac, J. (2001). Theory comparison: Uncertainty reduction, problematic integration, uncertainty management, and other curious constructs. *Conference Proceedings from International Communication Association*, pp. 456-476.

Dervin, B. (1980). Communication gaps and inequities. Moving toward a reconceptualization. In B. Dervin and M. J. Voigt, eds., *Progress in Communication Sciences*, 73-112. Norwood, NJ: Ablex.

Eveland, Jr., W. P. and Scheufele, D. A. (2000). Connecting news media use with gaps in knowledge and participation. *Political communication*. 17, 215-237.

Gaziano, E. and Gaziano, C. (1991). Social control, social change and the knowledge gap hypothesis, pp. 117-136. In D. Demers and K. Viswanath, eds. *Mass Media, Social Control, and Social Change: A Macrosocial Perspective*. Ames, IO: Iowa State University Press.

Graber, D. (2004). Mediated politics and citizenship in the twenty-first century. *Annual Review of Psychology*, 55, 545-571.

Hooper-Greenhill, E. *Museums and the shaping of knowledge*. New York: Routledge, 1992.

Howes, D. S. Why the Internet matters: A museum educator's perspective. In Din, H. and Hecht, P., eds., *The digital museum: A think guide*. Washington, D.C.: American Association of Museums, 2007.

Jerit, J., Barabas, J., and Bolsen, T. Citizens, knowledge, and the information environment. *American Journal of Political Scienc*e, 50, 266-282.

Lilla, M. (1985). The Museum in the city. *Journal of Aesthetic Education*, 19, 79-91.

Neuman, R. W. (1976). Patterns of recall among television news viewers. *Public Opinion Quarterly*, 40, 115-123.

Rucinski, D. (2004). Community boundedness, personal relevance, and the knowledge gap. *Communication Research*, 31, 472-495.

Samis, P. New technologies as part of a comprehensive interpretive plan. In Din, H. and Hecht, P., eds., *The digital museum: A think guide*. Washington, D.C.: American Association of Museums, 2007.

Samis, P. & Pau, S. (2009, March 31). After the heroism, collaboration: Organizational learning and the mobile space. In J. Trant and D. Bearman (eds). *Museums and the Web 2009: Proceedings*. Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2009/papers/samis/samis.html

Sligo, F. & Williams, J. Beyond the digital divide: Re-Assessing knowledge gaps. *Proceedings of the 2002 Conference of the Australian and New Zealand Communication Association*. Bond University: Queensland, Australia, 2002.

Tichenor, P. J., Donohue, G. A., and Olien, C. N. (1970). Mass media flow and differential growth in knowledge. *Public Opinion Quarterly*, 34, 159-170.

About the Author

Susana Smith Bautista
Susana Smith Bautista is a Ph.D. student and Provost Fellow at the Annenberg School of Communication, University of Southern California, where she also received her Masters degree in Art History/ Museum Studies. Her Bachelors degree is in Government from Pomona College. Susana has almost twenty years experience in the art world in Los Angeles, New York, and Greece working with museums, commercial galleries and non-profit art spaces, curating exhibitions, lecturing, and writing art criticism. She was Executive Director of the Mexican Cultural Institute of Los Angeles, Editorial Director of www.LatinArt.com, and Associate with the Daniel Saxon Gallery. Born in Pasadena, California, Susana also served the city as Arts and Culture Commissioner for six years. At USC, Susana is researching the role of museums in the digital age, how new technologies are affecting traditional museum practices and society, and the global interplay between museums, private arts institutions, and governmental bodies. She is a part of a USC research team working with Anne Balsamo on a MacArthur Foundation grant, "Inspiring the Technological Imagination: Museums and Libraries in the Digital Age." Her goals include contributing to research and policies that would better enable museums worldwide to understand and adapt to the digital age.

Please visit the Journal website at http://www.Arts-Journal.com
for further information about the Journal or to subscribe.

THE UNIVERSITY PRESS JOURNALS

The International JOURNAL of the ARTS IN SOCIETY

Creates a space for dialogue on innovative theories and practices in the arts, and their inter-relationships with society.
ISSN: 1833-1866
http://www.Arts-Journal.com

The International JOURNAL of the BOOK

Explores the past, present and future of books, publishing, libraries, information, literacy and learning in the information society.
ISSN: 1447-9567
http://www.Book-Journal.com

DESIGN PRINCIPLES & PRACTICES
An International Journal

Examines the meaning and purpose of 'design' while also speaking in grounded ways about the task of design and the use of designed artefacts and processes.
ISSN: 1833-1874
http://www.Design-Journal.com

The International JOURNAL of DIVERSITY in ORGANISATIONS, COMMUNITIES & NATIONS

Provides a forum for discussion and builds a body of knowledge on the forms and dynamics of difference and diversity.
ISSN: 1447-9583
http://www.Diversity-Journal.com

THE GLOBAL STUDIES JOURNAL

Maps and interprets new trends and patterns in globalisation.
ISSN 1835-4432
http://www.GlobalStudiesJournal.com

The International JOURNAL of the HUMANITIES

Discusses the role of the humanities in contemplating the future and the human, in an era otherwise dominated by scientific, technical and economic rationalisms.
ISSN: 1447-9559
http://www.Humanities-Journal.com

The International JOURNAL of LEARNING

Sets out to foster inquiry, invite dialogue and build a body of knowledge on the nature and future of learning.
ISSN: 1447-9540
http://www.Learning-Journal.com

The International JOURNAL of KNOWLEDGE, CULTURE & CHANGE MANAGEMENT

Creates a space for discussion of the nature and future of organisations, in all their forms and manifestations.
ISSN: 1447-9575
http://www.Management-Journal.com

The International JOURNAL of the INCLUSIVE MUSEUM

Addresses the key question: How can the institution of the museum become more inclusive?
ISSN 1835-2014
http://www.Museum-Journal.com

The International JOURNAL of INTERDISCIPLINARY SOCIAL SCIENCES

Discusses disciplinary and interdisciplinary approaches to knowledge creation within and across the various social sciences and between the social, natural and applied sciences.
ISSN: 1833-1882
http://www.Socialsciences-Journal.com

The International JOURNAL of ENVIRONMENTAL, CULTURAL, ECONOMIC & SOCIAL SUSTAINABILITY

Draws from the various fields and perspectives through which we can address fundamental questions of sustainability.
ISSN: 1832-2077
http://www.Sustainability-Journal.com

The International JOURNAL of TECHNOLOGY, KNOWLEDGE & SOCIETY

Focuses on a range of critically important themes in the various fields that address the complex and subtle relationships between technology, knowledge and society.
ISSN: 1832-3669
http://www.Technology-Journal.com

UBIQUITOUS LEARNING
An International Journal

Investigates the affordances for learning in the digital media, in school and throughout everyday life.
ISSN 1835-2030
http://www.ULJournal.com

JOURNAL of the World Universities Forum

Explores the meaning and purpose of the academy in times of striking social transformation.
ISSN 1835-2030
http://www.Universities-Journal.com

FOR SUBSCRIPTION INFORMATION, PLEASE CONTACT
subscriptions@commonground.com.au