Athens Institute for Education and Research
ATINER

ATINER's Conference Paper Series
ART2012-0205

Actual Connections in a Virtual World: Social Capital of Eric Whitacre's Virtual Choir

Mark Konewko
Carillonneur and Director of University Chorus
Marquette University
Milwaukee, Wisconsin
USA

An Introduction to
ATINER's Conference Paper Series

ATINER started to publish this conference papers series in 2012. It includes only the papers submitted for publication after they were presented at one of the conferences organized by our Institute every year. The papers published in the series have not been refereed and are published as they were submitted by the author. The series serves two purposes. First, we want to disseminate the information as fast as possible. Second, by doing so, the authors can receive comments useful to revise their papers before they are considered for publication in one of ATINER's books, following our standard procedures of a blind review.

Dr. Gregory T. Papanikos
President
Athens Institute for Education and Research

This paper should be cited as follows:

Konewko, M. (2012) "**Actual Connections in a Virtual World: Social Capital of Eric Whitacre's Virtual Choir**" Athens: ATINER'S Conference Paper Series, No: ART2012-0205.

Actual Connections in a Virtual World:
Social Capital of Eric Whitacre's Virtual Choir

Mark Konewko
Carillonneur and Director of University Chorus
Marquette University
Milwaukee, Wisconsin
USA

Abstract

This presentation uncovers the impact of the virtual choir experience on the choral world. Shifts in communication applications, both collectively and imaginatively, contribute to strong and flourishing virtual populations. A projected 600+ million people use social media Internet sites on a daily basis. Choral music now incorporates the virtual choirs of Eric Whitacre. As seen through a lens of the social capital theories of Bourdieu, Coleman, and Putnam, virtual choirs are a "place" where actual connections are strengthened within the virtual choir community. Mutual and shared formation of art, in the structure of the virtual choir, is a concrete example of the use of 21st century digital technological tools for composing. Whitacre is blazing new pathways of choral art creation and performance in the 21st century.

Contact Information of Corresponding author:

Introduction

The relatively recent shifts in our communications practice, both socially and artistically, have contributed to strong and thriving virtual communities. An estimated 600+ million people globally use social media Internet sites daily. Communities have formed online in new virtual realities that embrace shared art creation and presentation. There has been considerable research regarding interactive communities online by Jones, Hampton and Wellman, Rheingold, and Zhou, determining the validity, the social impact, and effect on the users lives of these virtual communities.

The theoretical output of Bourdieu, Coleman and Putnam scrutinizes social capital associated with regional substantive communities. They have examined the components of community and social interaction from a sociological viewpoint—a valid perspective that can also be used to investigate the phenomenon of online virtual communities. The theories of social capital are applied to the virtual community embedded in the virtual choir of Eric Whitacre.

The ancient practice of choral music now embraces the virtual choir of Whitacre. Collaborative, collective, and corporate creation of art, in the form of Whitacre's virtual choir, is a stunning example of the use of 21st century technological tools for composing and exposition. Whitacre's virtual choirs are evidence of successful usage of current digital technologies and social media. Completely online, Whitacre announces a 'gathering/submission of files' of singers, mixes the files with editing assistance, and posts the virtual choir on YouTube for the world to experience. Choral music, which was once experienced in person, is now possible online. Is the virtual choir a choir and can actual connections be made among the singers in a virtual setting?

This article analyzes the experience of singers participating in a virtual choir. The choral cultural theme addressed will be a sense of community and belonging that comes from choral singing and if the virtual bonds that are made online are actual connections. Using the theoretical framework of social capital, this article investigates if indeed the virtual choir meets the criteria of social capital theory by participation in the artistic endeavor of virtual choral singing online.

Virtual Choir: Impact on Choral World

Choral music is an expression of the mind and soul of humanity. Singing alone or in a group has existed for thousands of years. In particular, singing in groups or the choral experience of music, has connected the singers with each other and with the listener in ways that support the formation of community. Eger (2005) in *Einstein's Violin* elegantly reflects on the essence of art as a reflection of our society,

> Music and physics (and poetry) are written in heightened language, and language is a social product, which indicates that music and science are also social products. Both explain us to

> ourselves and to the larger society. Both communicate messages of subjective and objective truth as we see it, in different periods of human history. Both delve into the awesome environment all about us, from a flower to a star. (p. 127)

For centuries, music has acted as a means to bond individuals through making music or listening to music.

The twenty-first century offers composers an opportunity to exploit the current digital technology to create new models for art expression and put into action those imaginings. The landmark virtual choir work of Eric Whitacre is a pioneering endeavor in this novel sphere of music creation. It is a collaborative effort with singers and technicians under the direction of Whitacre. As a point of clarification and definition, a traditional face-to-face choir can be defined as physically meeting together and preparing and performing music. A virtual choir simplistically is defined as distinct audio and visual files uploaded to YouTube, mixed together into another 'choir' file and placed on the Internet on YouTube. This process, beginning in 2009, has evolved and has been refined each time the virtual choir is assembled.

In Whitacre's words, there is a profound wellspring behind a 'simple idea' (ericwhitacre.com, Still Flying High From My Experience at TED, posted on March 3, 2011 at 12:01 pm). If art is a mirror of the society and the time from which it came, then Whitacre's virtual choir project is a very hopeful statement reflecting our present global situation. In his most recent virtual choir 3 *Water Night*, over 3700 singers from 73 countries joined together to make a significant contribution in a collective positive statement—something beautiful that transcends time and space.

The first virtual choir began as an experiement with social media in May 2009 (ericwhitacre.com). Singer Britlin Losee sent a YouTube video to Whitacre that both touched Whitacre and sent a spark of creativity aflame.

> Today I received a beautiful and impassioned video message from a young singer and composer named Britlin Losee. I was deeply struck by her spirit, and her voice, and her *chutzpah*. …When I saw Britlin's video today the idea hit me like a brick: What if hundreds of people did the same thing and then we cut them all together, creating the very first virtual choir? (ericwhitacre.com)

This quote was posted on Whitacre's website on May 15, 2009 at 3:27 am. By 8:36 am, the first of 105 comments were posted. The comments were affirmative and helpful, offering to sing particular parts, suggestions on how to record, and problems of people not having the musical score to read.

The first 'official' Virtual Choir 1.0 *Lux Aurumque,* with a duration of 6 minutes, was posted on YouTube on March 21, 2010 with 185 voices from 12 countries. Whitacre recorded himself conducting the piece and encouraged more singers through his website to synchronize themselves with his conducting while singing. This video received over one million hits in the first two months after its release. The text of *Lux Aurumque* is based on a poem by Edward Esch. The composition exploits the tight harmonies of Whitacre,

creating a timeless musical gesture where the text and the music gel into an amorphous whole.

The visual representation of *Lux Aurumque* opens with the credits, '180 voices, 243 tracks, 12 countries, Eric Whitacre's Virtual Choir presents "*Lux Aurumque*", composed and conducted by Eric Whitacre' (eric whitacre.com). The opening visual image is a digitally constructed red curtain that parts to reveal a curved group of frames, each with a singer's face lit with an array of colored spot lights from above. The effect is similar to a traditional choral setting of a choir on stage. There is a black rectangle that floats in the middle of the screen in the position of where the conductor would normally be positioned. As the piece begins, a two-dimensional image of Whitacre conducting the seven rows of singing heads on flat monitors. As the piece progresses we see each singer's portrait framed in their private environment, their study, bedroom, closet, wherever they recorded themselves singing their individual part. The effect gives one pause; each singer, obviously alone with headphones, singing by themselves but mixed together in a sonic canyon. Each singer maintains his or her individuality yet create a collective union of purpose and sound. They are men and women, mostly young, from 12 countries. They are a choir. A choir that never sang together before, never met each other, never heard each other sing together. They are a virtual choir.

On September 22, 2010, Whitacre posted the following on his website at 11:27 pm,

> Here we go again, gang. For the next version of the virtual choir we will sing *Sleep*, and this time around, we're shooting for the Guinness title of "World's Largest Internet Choir." We'll need
at
> least 900 singers, so all of you are invited. Any age is welcome' (ericwhitacre.com).

In the end, *Sleep*, posted on YouTube on March 6, 2011, had 2,052 singers from 58 countries. The duration of *Sleep* is 9 minutes and 35 seconds. The process of assembling the Virtual Choir for *Sleep* was a laborous task from concept to final product.

Within hours of the invitation three entries came in, two from the USA and one from Portugal. A singer and IT consultant from London, Tony Piper, built a web-based system that would track the incoming entries. In October, 2010, a new Google Earth web browser plugin was used to show the location of each singer around the world. At the end of November, Whitacre had a virtual choir party where the Cambridge University Choral Scolars uploaded another twenty-two entries. Throughout December more and more entries were submitted. On December 31, 2010, a nine-year-old girl from the United Kingdom, with the consent of her mother, submitted an entry—her video was shared with the world and inspired a group of singers who had been putting off their submission to finish their entry (http://ericwhitacre.com/the-virtual-choir/making-of, retrieved October 3, 2011).

Throughout the process singers were connected through Facebook and Twitter and a blog about peoples' experiences began to emerge. Singers were responsible for many aspects of preparation that normally are assisted by the conductor personally. Instructions from Whitacre included,

> Please visit the official YouTube page to see the instruction videos and conductor track, and visit the virtual choir page to download the sheet music. Let's make history!" (ericwhitacre.com).

It appears that the preparation, learning, practicing and uploading the audio and video file, accentuated the productivity of the singers.

The United Kingdom-based rehabstudio and Cake TV developed the concept, the look, and storyboard for the video. Both the video and audio files were processed by rehabstudio as the files were uploaded. Technologically speaking, the task of making a unified whole both visually and audio was a complex venture. The interconnected planetary relationships presented in the final video are a testimony and representation of 'the power of the Internet to connect people of all backgrounds and abilities to create something beautiful across time and space' (ericwhitacre.com). The exquisite music of this second virtual choir added the dimension of a visual story.

The Virtual Choir 2.0 begins with a credit stating, 'Eric Whitacre's Virtual Choir 2.0 "*Sleep*", over 2,000 videos from 58 countries' (ericwhitacre.com). This is followed by a constructed cosmos with a circular cut out of Whitacre conducting this constructed choral universe. There are fade in and outs of various transparent spheres with closely cropped head shots of the singers. Each sphere, labeled to identify the participating countries and connected to others by arches of light, is made up of numerous faces of the singers. Close ups of these spheres reveal each individual singer performing alone in their own environment with their headphones. They maintain their individuality yet become this collective global choir never physically singing together, never meeting each other, never hearing what they all sound like together. They are a choir—a stunning representation of the interconnectedness of the singers passively creating but actively participating in a collective thing of beauty. They are a virtual choir.

This virtual choir takes on a completely different dimension with the visual story of these singers connected in this vast universe of sound. Visual metaphors of gathering, connecting, resting all take place throughout the piece. This is no longer an artistic expression of music and poetry. This production of the second virtual choir embraces the richness of visual elements that facilitate telling a story. The virtual choir 2.0 *Sleep* has a new dimension with its storyline unfolding through music, poetry and visual representation.

The response of *Sleep* has been epic, over 250,000 hits in 10 days! Some singers who participated in the experience are using a blog to talk about their experiences of preparation, their acceptance into the choir and their lives after the release on April 7, 2011. There is an overwhelming positive sense of the experience among the singers. They blog about the 'historic' nature of their involvement. As stated by singer Corinne,

> the individuals who particitated in this event participated in an event that was greater than their individual part. And that's just it, it's universal, it's the human condition, that interconnectedness we're all are part of, something greater than we even understand" (personal communication, 2011).

The re-occurring theme of belonging to a group or a community is present in this virtual choir experience. One of the extra-musical benefits of singing in a choir is the friendships that can be made and the connections with other singers. This same benefit is present in the virtual choir.

Virtual Choir 3, *Water Night*, was 'launched' (ericwhitacre.com) on April 2, 2012. With a text by Octavio Paz, this virtual choir received 3746 videos from 73 countries. The presentation opens with a drop of water descending from space arriving in a large body of water with Whitacre directing a semi-circular towering wall of singers, each in their own personal environment. Over 170,000 hits on YouTube in the first month since it's release, *Water Night* continues the growing interest and curiosity in Whitacre's virtual choir community.

The commonality between a virtual choir and a traditional face-to-face choir is based in the long historic need and desire to communicate and create a choral sound together. Philosopher Grund (2006) anticipated the success of the use of computer music modeling.

> As a philosopher, I see the opportunity for the direction and development of technology towards the ends of greater understanding of what it is to be human, and—conversely—the embracing of technology on the part of the humanities to be the most exciting future for both fields of endeavor, and CMMIR [Computer Music Modeling and Information Retrieval] is one of the paradigm areas where this fruitful exchange is already taking place (pg. 273).

Current digital technologies are yet another tool used to communicate the artistic vocal expression of choral music. The brilliance is how those tools are utilized to advance an idea.

Social Media and Social Capital

At the end of the twentieth-century and the beginning of the twenty-first century, digital technology has heightened the potential of a quicker, broader, and far-reaching network of people. The digital technological advances in the past 30 years have been exponentially transformational for those with access. Industry, education, communication, health services and the arts have all been altered. Business affairs are conducted in a different way, novel systems and structures are utilized for teaching and learning, up-to-the-minute communication systems have are expected, doctors and patients have broad immediate research in the medical field and artists explore innovative possibilities for artistic expression. Electronic technology is becoming faster and more powerful with increased influence society.

Global communications offer the current generation the possibility to dialog and encounter others with the same interests. Relationships between two individuals have developed into an impersonal association. The entire nature of rapport between entities is morphing into a novel association—an association that is 'controlled' by an on or off button. McLaughlin, Osborne, and Ellison

(1997) highlight this transformation in the article "Virtual Community in a Telepresence Environment". They state,

> networks [are] not of primary interpersonal relationships but rather of impersonal associations integrated via a mass medium. Further, issues of personal identity can be compromised and confounded in the virtual commons, as the current limitations of bandwidth are exploited to create new opportunities for self-presentation and social experimentation. (p. 146)

In general, relationships based on proximity, time, and trust are grounded in dialog and conversation among those within a group. These relationships take place in a substantive reality. This concept does not exist in a virtual choir. In the virtual choir experience the community aspect is a third person observable experience that involves the participants solely as subject matter to be viewed. Involvement by the participants in a virtual choir includes the common interest to sing and have audio and video track added to the final mix. The connection with other singers becomes a by-product of the final mix where the singers may never converse, know, or encounter the other singers. In the virtual choir experience, the link to that relationship is not so much between people but rather linking Whitacre and his fan base.

Social researchers have been studying virtual communities and their effects on lifestyle. The WELL is an online community that emerged in the San Francisco Bay area in the mid 1980s. Hampton and Wellman (2000) researched "Netville" a wired suburb of Toronto, Canada during 1998-99. Riemens and Lovink (2000) experimented with an online community in the Netherlands and found out that the online virtual lives of these people actually enhanced their everyday lives. The overall body of evidence from these studies confirms that online social interaction does not interfere with or is a substitute for other substantive social activities and that virtual communities do not lead to greater social isolation. What it does suggest is that there is a need for a new definition of community.

These new forms of social interaction prod a re-definition of community that supports the fascination of the individual with the online technology and the function of a de-centralized population. De-emphasizing the cultural component of traditional residential communities and an awareness of the lack of proximate spatial nature of relationships become important factors when defining virtual communities. The theoretical structure of social capital in substantive reality can be useful in understanding communities in virtual reality.

Bourdieu, a French theorist, was using the term "social capital" at the beginning of the 1980s in a cultural analysis of French society. His work initiated the verbiage regarding cultural, symbolic, social capital and systems with which to research the dynamic matrix of social life. He views social capital as part of cultural capital, symbolic capital, and economic capital. Bourdieu's center of attention is on inquiries of class categories, supremacy, conflict and the manner in which various capitals are formed.

Reintroducing the concept of *habitus*, originally grounded in the philosophies of Aristotle and later Mauss, Bourdieu explains social class and standing as a byproduct of how persons choose to place themselves in a social

structure. Bourdieu (1984) defines *habitus* within the framework of conditions of existence and life-style.

> The *habitus* is not only a structuring structure, which organizes practices and the perception of practices, but also a structured structure: the principle of division into logical classes which organizes the perception of the social world is itself the product of internalization of the division into social classes. Each class condition is defined, simultaneously, by its intrinsic properties and by the relational properties which it derives from its position in the system of class conditions. (p. 170)

The economic capital of an individual shapes the decisions and tastes of the person. Regardless of class distinction, the economic capital allows the person to choose a particular path in life. Cultural capital is intimately connected to the economic capital.

The all-important situations of persons are defining factors for the development of social capital. Social stratification grants and denies right of entry to the Internet. The assumption that all have access and uses the Internet is an incorrect conjecture. The exclusivity of Internet admission becomes a passport for those able to participate in virtual realities. Therefore, there is a discussion of communities or realities being formed on the Internet, only those who have a particular social rank are users. The social capital that develops on the Internet is only available for those who have access both technologically and financially.

The *habitus* of a virtual reality includes those with the educational know-how and the financially and technologically adept individuals. Even though there is a social exclusivity of Internet usage, Bourdieu's social capital is applicable to the virtual communities that exist and that are frequented by individuals. Notwithstanding those who sing in face-to-face traditional choirs, some singers do not participate in the virtual choir experience because either they do not know it exists, because there may be something technologically challenging that might not permit them to contribute to the virtual choir, or may philosophically disagree with the fundamental concept of a virtual choir. If they are not connected to the network of music lovers that are part of Whitacre's followers or do not know other singers who have knowledge of the possibility, they will not contribute to the virtual choir experience.

This social stratification within the choral world supports the *habitas* theory of Bourdieu, (1984). Assuming the economic support for entry into the world of the virtual choir, there exist the barriers of inclusion by knowledge of the event, by a technological obstacles, and beliefs that are not surmounted allowing sharing in the virtual choir. On the other hand, choristers that do contribute to the virtual choir experience are connected to the Whitacre network, surpass the necessary recording and uploading of video and audio files, and have a clear desire to fully involve themselves in the virtual choir occurrence regardless of the possibility of rejection. These realities of participation and non-participation maintain the social capital theory of Bourdieu, (1984), with regard to the social structures of singers and the individual's subjective experiences.

Coleman's (1990) theory of social capital, grounded in rational choice theory, can be used as a framework for understanding social and economic behaviors. Using the language of economics, it is based on an individual's thought process that weighs the costs against the benefits to arrive at an optimal personal advantage. In a social science setting the rational choice theory is utilized to scrutinize collective behaviors that become the effect of the actions and thoughts of individuals. Principally, individuals make choices and act, based on the philosophy that maximizes what is best and good for them and minimizes their effort expended to gain the benefit. According to Coleman social capital lies in the relationships connecting people not the individuals themselves but the complex interaction linking them (p. 304). The systematization of society is what makes up social capital because the organizations make possible the achievement of collective goals. In Coleman's *Foundations of Social Theory* (1990), he affirms

> Social capital, in turn, is created when the relations among persons change in ways to facilitate action. Physical capital is wholly tangible, being embodied in observable material form: human capital is less tangible, being embodied in the skills and knowledge acquired by an individual; social capital is even less tangible, for it is embodied in the *relations* among persons. (p. 304)

Coleman surrounds his theory of social capital within the construction of the relationship between human capital and social capital.

The reciprocal nature inherent in the virtual choir of Whitacre and the singers demonstrates the interplay between the two building social capital. For Whitacre, his creative actions that benefit the artistic pool of output, his career, and his drive to present innovative opportunities for singers outweigh the personal cost of forging into un-charted possibilities—whether ten or a thousand participants, no one has accomplished a virtual choir. Its success can be measured with the increase of numbers of participants from the first to the second virtual choir. The first virtual choir, *Lux Aurumque*, had 185 singers, the second virtual choir, *Sleep*, had 2052 participants, and the third virtual choir, *Water Night* had 3,746 files.

The technological advances that are used by Whitacre to realize the virtual choir used a considerable expenditure of energy and financial resources. Whitacre has delegated what he is unfamiliar with in the technological realm to professional technicians. The singers act on their benefit by participating in the virtual choir as it far outweighs the costs. Singers, already familiar with both the hard and software necessary to access the Internet, have made the financial investment in equipment, found the time to learn the piece of music, practice it, and then upload their audio and video files. The cost of time spent is superceded by the benefit of participating in a novel and creative venture.

In *Bowling alone*, Putnam (2000) laments the decline of social capital in the United States since 1960 in the areas of civic, social, associational, and political life. According to Putnam, this collapse of social capital carries with it serious consequences. He separates social capital in two categories, bonding capital and bridging capital. Bonding capital is manifest when people share the same interests, attributes, spirituality, race, and age (p. 23), whereas bridging capital is evident when people connect with others outside of their sphere of

relationships. These two capitals work together to create a peaceful society. The breakdown of either inevitably leads to a decline in social stability and growth.

Putnam uses sport clubs as an indicator for the decline and implications for social capital. He points out, "according to the American Bowling Congress, ninety-one million Americans bowled at some point during 1996, 'more than 2 percent more than voted in the 1998 congressional elections' (pg. 113). He illustrates that even though there has been an increase in bowling there has been a significant decrease in league bowling or bowling clubs. Putnam (2000) states,

> Even after the 1980's plunge in league bowling, between 2 and 3 percent of American adults regularly bowled in leagues, although as we have seen, that figure was dropping fast. The decline in league bowling threatens the livelihood of bowling lane proprietors, because according to the owner of one of the nation's largest bowling lane chains, league bowlers consume three times as much beer and pizza as do solo bowlers, and the money in bowling is in the beer and pizza, not the balls and shoes. The broader social significance, however, lies in the social interaction and even occasionally civic conversations over beer and pizza that solo bowlers forgo. Whether or not bowling beats balloting in the eyes of most Americans, bowling teams illustrate yet another vanishing form of social capital. (p. 113)

This decline in social capital also has an impact on the economic value of social interaction. The expendable financial resources used for one type of entertainment have channeled to another outlet of expenditure. Perhaps these revised financial focal points include the interest in this novel form of virtual reality. Putnam points to a decline in social capital rather than a shift in social capital.

The participation in the virtual choir adheres to the theory of Putnam (2000) in that the participants share the attribute of bonding. Those that sing in the virtual choir share the interest in the music of Whitacre and the novelty of the experience and final product. There is an attraction to the music and its message. The combination of musical harmonies and the integration of the poetry with the music are the elements that attract the singers. This bonding capital is present in a virtual choir. The bridging capital that Putnam (2000) presents is vaguely present in the connections made with the other singers since the singers never really connect. Singers might reach out to others involved in the virtual choir but this bridging is only possible if the individual singer seeks out another member of the choir. Singers might connect with other singers outside of their sphere of relationships but it is not an inherent part of the virtual choir experience.

Within the virtual choir the association is formed after the final mix. Some of the performers are professional singers, some are amateurs, and others live in remote areas of the world while others do not sing in other choirs. Even though the singers come from spheres of relationships that are not common to each other the connection formed in the participation in the virtual choir is strong. Putnam's (2000) definition of social capital needs to include the virtual

realities that are a concrete reality in our current notion of community and relationships.

Putnam states that the breakdown of these capitals inevitably leads to a decline in social stability and growth. In contrast, the results of the virtual choirs, *Lux Aurumque* (2010) and *Sleep* (2011), and *Water Night (2012)* have created considerable growth within the choral community and the non-choral community. It has called attention to the performance, to the music of Whitacre, and to the creative usage of current technologies. The result of the virtual choir is positive. Social capital, in this reality, is being strengthened by the bonds and connections made in a virtual reality.

Conclusion

Choral music cognition unfolds within the web of social interactions. These exchanges form social capital in both the traditional face-to-face choral experience and within the participation in a virtual choir. By applying the substantive social capital theories of Bourdieu, Coleman, and Putnam the virtual choir communities are indeed meeting places to interact and connect with other singers. Nicholas Negroponte (1995) in his *Being Digital* optimistically proclaims,

> The harmonizing effect of being digital is already apparent as previously partitioned disciplines and enterprises find themselves collaborating, not competing. A previously missing common language emerges, allowing people to understand across boundaries (p. 230).

Whitacre's virtual choir actually brings together a community of singers across the globe—there is a participation in a collaborative work of art that bonds and bridges the participants as well as the spectators.

The virtual choir does more than entertain society—this new choral form boldly transcends traditional definitions of choir and community. It underscores the reality that choral music, both face-to-face and virtually, is a social experience. Potter (2000) eloquently states,

> If there is one identifiable characteristic associated with singing and singers as we move into the new millennium, it is a move away from the closed introspection of an earlier generation, towards an open-endedness, a generosity of spirit that can bring together musicians and listeners from creeds and cultures all over the planet (pg. 5).

Whitacre is infusing the choral world with new energy using twenty-first-century digital technologies to facilitate actual connections in a virtual world.

Bibliography

Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste*. (R. Nice, Trans.). Cambridge, MA: Harvard University Press.

Coleman, J. (1988). Social Capital in the Creation of Human Capital. In the *American Journal of Sociology*, vol. 94, supplement: Organizations and Institutions:

Sociological and Economic Approaches to the Analysis of Social Structure. pp. S95-S120. Chicago, IL: The University of Chicago Press.

Coleman, J. (1990). *Foundations of social theory*. Cambridge, Massachusetts: Belknap Press of Harvard University Press.

Coleman, J. (2006). "Social capital in the creation of human capital," *American Journal of Sociology*, (94 Supplement), pg. 97. In Social Capital: A multifaceted Perspective Editors, Partha Dasgupta and Ismail Serageldin. (2000). Washington, DC: The International Bank for Reconstruction.

Edger, J. (2005). *Einstein's violin: A conductor's notes on music, physics, and social change*. New York, NY: Penguin Group.

Gannon, M. J. (2001). *Cultural metaphors: Readings, research translations, and commentary*. Thousand Oaks, CA: Sage Publications.

Grund, C. M. (2006). Interdisciplinarity and Computer Music Modeling and Information Retrieval: When Will the Humanities Get into the Act? In *Computer music modeling and retrieval*. (Eds.). Kronland-Martinet, R., Voinier, T., & Ystad, S. Third International Symposium, CMMR 2005 Pisa, Italy, September 26-28, 2005. Berlin: Springer-Verlag.

Jones, S. Editor. (1999). *Doing Internet research: Critical issues and methods for examining the net.* Thousand Oaks, CA: Sage.

Jones, S. (1997). *Virtual culture: Identity and communication in cybersociety*. Thousand Oaks, CA: Sage.

Jones, S. (2006). *Against technology: From the luddites to neo-luddism*. New York, NY: Routledge.

McLaughlin, M. L., Osborne, K. K., and Ellison, N. B. (1997). Virtual Community in a Telepresence Environment. In S. G. Jones (Ed.), *Virtual culture: Identity & communication in cybersociety*. London, UK: Sage Publications.

Negroponte, N. (1995). *Being digital*. New York, NY: Alfred A Knopf.

Potter, J. (Ed.). (2000). *The Cambridge companion to singing.* Cambridge, UK: Cambridge University Press.

Putnam, R. Leonardi, R. & Nanetti, R. (1993). *Making democracy work: Civic traditions in modern italy.* Princeton, New Jersey: Princeton University Press.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York, NY: Simon and Schuster.

Putnam, R. D. and Ledstein, L. M. (2003). *Better together: Restoring the American community*. New York, NY: Simon & Schuster.

Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. Reading, Massachusetts: Addison-Wesley Publishing Company.

Riemans, P. and Lovink, G. (2000). Amsterdam Public Digital Culture 2000: On the Contradictions Among Users Profiles. Avaialable at http://www.nettime.org/ Lists-Archives/nettime-l-0008/msg00128.html [April 5 2012].

Wellman, B. and Hampton, K. (1999). "Netville on-line and off-line: Observing and surveying a wired suburb." In American Behavioral Scientist 43(3), 475-492. 1999.

Wellman, B. and Hampton, K. (2000). "Examining community in the digital neighbourhood: Early results from Canada's wired suburb." In Toru Ishida & Katherine Isbister (Eds.) *Digital Cities: Technologies, experiences, and future perspectives*. Lecture notes in Computer Science 1765. Heidelberg: Springer-Verlag, 194-208. 2000.

Whitacre, E. (2010). http://ericwhitacre.com/blog/the-virtual-choir-how-we-did-it http://www.youtube.com/watch?v=0Zqp0OpzMAI

Zhou, C., Smith, N., and Wollan, R. (2011). *The social media management handbook: Everything you need to know to get social media working in your business*. Hoboken, New Jersey. John Wiley & Sons, Inc.