NORTHERN PLAINS ETHICS JOURNAL

Northern Plains Ethics Journal

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Introduction

The *Northern Plains Ethics Journal* (*NPEJ*) is the first peer-reviewed ethics and philosophy journal in North Dakota. The *NPEJ*'s mission is to create a high-quality dedicated publication platform to promote democratic participation in social and ethical issues affecting the Red River Valley and beyond.

To fulfill this mission, the *NPEJ* is a marketplace for the accumulation, dissemination, discussion, and recognition of scholarship, ideas, and other work related to ethical issues affecting the USA's Northern Plains. The *NPEJ* provides a broad foundation for accessing work related to understanding and investigating past and present social and ethical issues, which is instrumental and critical in finding solutions for challenges faced by communities in the region, country, and world.

The *NPEJ* is the official journal of the Northern Plains Ethics Institute (NPEI) at North Dakota State University. Founded in 2000, The NPEI's mission is to promote democratic participation in social and ethical issues affecting the Red River region and beyond. The NPEI fulfills its charge by engaging citizens in various discussions focusing on what kind of society they want to live in and how they go about creating it.

The NPEI is now part of an international group of centers and institutes founding the International Academy of Medical Ethics and Public Health in Paris. The International Academy of Medical Ethics and Public Health was founded in 2016 based on a commitment to an international multidisciplinary reflection in bioethics. The Academy is focused on the current challenges confronting both private and public interests in the context of families, universities, public institutions, and all levels of government. The aim of the Academy is to accomplish an ongoing international review of seminal issues in bioethics that can benefit from a diversity of political outlook, culture, and philosophical orientation. The Academy will function as a bilingual center point for these exchanges. Its headquarters are located at the Université René Descartes (Sorbonne Paris Cité).

As the relationship between the Academy and the NPEI grows, we will add to our already fine selection of national and regional research papers. Our goal is to also bring our readers the very best set of interdisciplinary, international offerings, so that they have a greater breadth and depth of information.

In this issue, we are again pleased to have a variety of papers spanning theory and application. Of special note is Thomas Creely et al.'s work on Ambient Intelligent Technologies (AmI) and warfare. The article itself addresses ethical issues that have not been sorted out even though there is a great rush to create and implement AmI. The issues importance made us seek out additional commentaries, which can be found immediately after the featured article. The hope is to create a dialogue in the community.

The remaining articles are also of some note. They include cutting edge work on challenges to values in rapidly evolving communities, whether the state of North Dakota should implement an ethics commission for its state legislature, discussion of whether a traditional Greek view of the soul is sustainable, and other matters of current weighty import.

As always, the *NPEJ* has something that most other journals lack: A section for comments after each article. Since ethics is not something done well in a vacuum away from the real world, community conversations are vital to better critical reasoning and decision making. By providing a venue for such conversations, we hope to inform people and achieve our mission of promoting democratic

participation.

Dennis Cooley, *Editor of the Northern Plains Ethics Institute and Director of the Northern Plains Ethics Institute*

Editors' note: Unless otherwise noted, the views expressed in this journal do not necessarily reflect the views of the editors, the Northern Plains Ethics Institute, or North Dakota State University.

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Scholar Section

The Impact of Ambient Intelligence Technologies on Individuals, Society and Warfare

"The real problem is not whether machines think but whether men do" B.F. Skinner

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Abstract
Advances in Ambient Intelligence (AmI) technologies have significant implications for individuals, society and warfare. This paper examines ethical challenges associated with the development of the emerging discipline of Ambient Intelligence technologies. It is argued that Ambient Intelligence technologies, while providing support for many aspects of everyday life and well-being, may also present increased privacy risks and potential risks to national security.

Keywords: *Ambient Intelligence, Ubiquitous Computing, Intelligent User Interfaces, Cyber Crime, Ethics, Freedom, Privacy*

Introduction: The emergence of Ambient Intelligence Technologies

The 21st Century has seen the emergence of numerous advanced technologies such as personal computers, cell phone technology, cognitive robotics, artificial intelligence, and autonomous, unmanned systems that collaborate with humans and other systems. This vision of the future was inspired by the Philips Company (1999) which was the first organization to predict that a distributed network of intelligent devices would support humans with communication, information and entertainment. Ambient Intelligence (AmI) has been characterized by the integration of pervasive computing power and intuitive interface designs. One of the key characteristics in an Ambient Intelligence environment is that AmI technologies must be context aware of the environment in which they are being used. AmI technology embedded in the environment, in combination with wireless communication, has the capacity to identify an individual's geolocation to deliver context-driven personalized information in a natural and intuitive manner. Ambient intelligence may be integrated into robotics, autonomous unmanned systems and integrated with distributed sensor networks embedded in our environments.

Advances in computing power combined with an increase in the capabilities of AmI will transform the ways in which we live, work and maintain security on a global scale. Technology breakthroughs via AmI will influence and shape the ways in which we interact with the environment. AmI systems will support adaptive Intelligent User Interfaces (IUI) that is proactive vs passive.

AmI facilitates the dissemination of information on a global scale which presents both advantages and challenges for the future global security environment. For the individual, this technology provides a means of facilitating enhanced health care management but also raises concerns regarding our personal freedom and privacy issues. For the warfighter, it provides a means of managing the battlespace from a centralized command via the network. For the adversary, it provides the capability to

conduct operations in a decentralized manner. For society, it presents challenges to personal privacy and freedom.

AmI Technology

AmI extends advances in computing power, artificial intelligence and distributed sensor networks that have revolutionized the way we live by providing " a digital environment that proactively, but sensibly, supports people in their daily lives," (Cook, 2009). AmI technologies permeate the environment with intelligence and create a symbiotic relationship between humans and systems that may be tailored and personalized to meet the individual's needs.

AmI is comprised of networks of intelligent agents that are sensitive, responsive and adaptive to changes (e.g. temperature, lighting, etc.) in the environment and to personal preferences. Intelligent agents are autonomous, computer generated systems that communicate and collaborate with each other (Dilek, Cakir & Aydin, 2015). These collaborative networks of intelligent agents evaluate information, communicate with each other, as well as develop plans and make decisions. Such networks are often used in security systems wherein complex, adaptive multi-agent systems provide a means of preserving information, as well as protecting the system from attacks.

The dynamic nature of the information environment requires a network that is robust and capable of assessing and prioritizing information required by the user in a timely manner. AmI technologies integrate components of human intelligence such as language, speech recognition, image recognition and knowledge as part of the intelligent agent network. Thus, intelligent agent architectures serve as the cognitive components of a multi-agent intelligent agent network system. These networks of intelligent agents are adaptive, formulate and evaluate hypotheses, communicate and collaborate with other agents in the network to develop plans and make decisions.

Biological computational models are often designed for intrusion detection as they provide an adaptive response to intrusion detection. Experiments have shown the benefits of bio-inspired systems with fuzzy detection systems in improving detection precision (Pei and Song, 2008). One of the main advantages of fuzzy rule-based systems is the flexibility in dealing with subjective and objective knowledge and vague concepts (Masakowski & Grasso, 2012). Genetic algorithms model the natural selection process using a machine learning approach. This evolutionary biological system integrates a rule-based approach to develop adaptive responses to potential security threats (Kim, Yang & Sim, 2004). The Artificial Immune System (AIS) computational model also mimics the biological immune response thereby providing an adaptive response for detecting and defending against potential attacks (Qiang &Yiqian, 2010). AIS systems, similar to the natural immune system, are designed to detect intrusions and maintain homeostasis in the system and thereby play a pivotal role in cyber security.

Advances in the development of bio-inspired computational models serve as an example of the flexibility and adaptability of intelligent systems that are robust enough to counter cyberattacks. Future systems must be designed to anticipate the potential threat as well as monitor detect and defend against it. Such systems must be proactive and designed from cognition-centric perspective vs the human-centric designs of traditional systems (Masakowski, 2008). That is, future AmI systems must be able to anticipate and perceive potential threats and opportunities for the individual and anticipate what the individual will think or want to do. Systems will need to recognize multiple users, and

learn from their behaviours and interactions, as well as leverage information from their environment to anticipate their needs.

For the warfighter, AmI intelligent agent networks must be designed to address questions in anticipation of an event from an adversary's perspective. The AmI system would have to posit hypotheses related to potential paths of intrusion, and potential security threats. Namely, what strategies might adversaries employ to achieve their objectives? How does their social network interact? How can the adaptive AmI network anticipate the threat, learn the adversaries' strategies, and develop proactive plans to effectively deter and defend against such threats? The digital "Butler" of the future may also be the future "Security Guard" for all networks.

Pervasive computing affords AmI technologies the capacity to be "context aware" and capable of adapting to dynamic changes in the environment (Brey, 2005). These embedded systems are transparent to the individual user and are woven into the tapestry of everyday life in a seamless manner. Indeed, AmI technologies are proactive and anticipate what the user requires from the environment. This ability to perceive the environment (context aware) and the location of the individual as well as an awareness of the individual's preferences, provides the AmI system with the ability to perceive, evaluate and make decisions without human input (Brey, 2005). This capability serves as evidence of the need to employ cognition-centric design rather than the traditional human-centric approach. Indeed, cognition-centric design goes beyond traditional interface designs by providing an intuitive, adaptive system that is profiled to the individual's preferences and anticipates his needs and preferences (Masakowski, 2008).

Today, we see evidence of AmI technology at work in our daily email as Amazon.com forwards recommendations for reading based on our book preferences and proactively prompts us regarding books we might find of interest in the future. Evidence suggests that AmI capitalizes on image recognition and visual search strategies. For example, there are pre-attentive processes and visual search strategies that humans employ (Triesman, et al, 1992) which may be modelled by the AmI network in anticipation of a human need and predict anticipated outcomes. For example, the information we seek is indicative of our intentions and may be combined with our specific profile within a context that would afford the intelligent agent network the means of making inferences about our situation and our intent. Specifically, AmI intelligent agent networks facilitate sensing, locating an individual and sense information from the environment which helps the AmI network to form perspectives and evaluate an individual's needs and intentions. Thus, these AmI intelligent networks have been designed to be aware of our identities, behavioural patterns, social networks, location, intentions, as well as anticipate and predict our future needs.

This represents a paradigm shift in information management wherein AmI technologies serve as a proactive computer technology which can be used to support public safety and security via embedded systems in the environment. As a benefit to society, the integration of AmI sensor networks within our everyday environment enables a system to provide security and safety for the public. For the individual, this transparent network provides critical support for everyday living and lifestyle management. For medical management, this system provides a means of monitoring senior health care and for those children in need of behavioural monitoring, such as Autism. (Georgia Tech Research Institute, 2016)

For national security, this network provides a means of capturing and assessing accumulated data/information that may prove critical for national and global security. Certainly, the heightened awareness of terrorist groups such as ISIS, et al. elevates the need to develop ubiquitous intelligence networks and surveillance technologies that can manage a vast network of information. Indeed, AmI technologies with its pervasive intelligent agent network provide a robust, adaptive and optimal means of combating cyberattacks and ensuring national and global security. In fact, there are digital cities being designed around the globe to take advantage of AmI technology.

Digital Cities and Security

The aim of AmI technologies is to make human life easier by creating an environment that is sensitive and responsive to our needs (Philips, 1999). To this end, AmI technologies have been embedded into the design of home environments to help humans live in a comfortable and safe environment. Originally, product designers and advertisers were among the first to capitalize on these innovations. Marketing firms quickly realized the advantage of personalizing ads to meet your specific desires and needs. Architects have extended the application of AmI to home design and have been designing digital cities around the globe. Each year, there is a digital city design competition (Wood, et al. 2015). Among the topics included in the design of the digital city is that of multi-jurisdictional cybersecurity. That is, cities are sharing the costs of cybersecurity with the advent of these technologies.

Digital cities are noted for their technological innovation which most often includes Cyber Security, Government transparency, Virtualization for data storage, Budget Management, Social Media, Mobile applications, Tracking technologies, Cloud Computing, Disaster Recovery and Geospatial mapping. Each of these technologies is aimed at supporting and managing the city and providing security for its citizenry. Each city recognizes the value of the technology to support their region and empower their leaders to be more effective in managing their cities.

Indeed, these technologies are aimed at bridging the gap of its digital divide by using open data architecture to keep their city's data secure. Among the principal success stories is that of the city of Winston-Salem, N.C. which uses cloud services, mobile tracking systems, internal and external use of social media and a WinstonNet program aimed at keeping the community program open to the community. Philadelphia was the recent winner of the Digital City design competition and acknowledged that this technology will enhance their cybersecurity (Wood, et al. 2015). Transparency is the key ingredient to the digital city design! The system tells each city how it is doing from a security, financial and physical infrastructure perspective. It highlights the risks and vulnerabilities of the city, as well as facilitating communications among cities in the network. Using a mobile pavement tracking system the GIS-based and GPS-enabled mobile application can monitor the condition of roads and paving projects. Cybersecurity is ensured by developing a joint effort with neighbouring communities to monitor and ensure security. The digital city design effort is a global event.

China has seen an expansive growth of its aging population. Today, there are more than 200 million people above the age of 60 years of age. Given their mandate regarding limitations on children, the one child solution has given rise to an emerging medical management crisis for the increasing aging population. Thus, there is a need for China to implement smart digital cities as a potential solution. Smart cities will be built

with smart homes. This includes a multidisciplinary approach to monitor health, food, lifestyle, wellness and social aspects of daily life, built into the design. Medical monitoring of health will be the overlay of each of these designs aimed at addressing the elder care issue. Interactive healthcare will be ubiquitous! Further, many universities in the US are also exploring innovative solutions to home design aimed at supporting human needs and requirements. Among these, the Georgia Tech Research Institute has designed an "Aware Home" that provides a means of exploring the application of technologies to support senior citizens in home health monitoring and care (GTRI, 2016). The "Bespoke" home design of the future will be an extension of your individual daily needs to ensure that you have a quality of life and level of security that is specifically designed for you.

These technologies extend to the military and defence departments as well. The tactics of warfare are well established; what changes are the technologies engaged. Warfare evolves based on technological advances ranging from the first Gatling gun, the tank, the fixed–wing aircraft, the aircraft carrier, the nuclear powered submarine to the first autonomous, unmanned vehicle (UUV, UAV, and UGV). Autonomous, unmanned systems operate as a machine that can think, collaborate with other unmanned systems and perform programmed behaviours such as collecting data, imaging and tracking. This cognitive capacity enables distributed networks of autonomous, unmanned systems to collaborate and coordinate on a mission. Likewise, drones have demonstrated their role in precision strike missions. Robotics is commonly used in military operations to defuse IEDs. There are significant benefits for engaging unmanned systems, drones and robots to preserve human life in combat situations. However, the challenge comes in when we think of the ethical and moral implications of integrating these systems with artificial intelligence, i.e. a brain. Russia has recently announced its intent to develop combat robotic guards to become operational in 2017-2018 (Defense Update, 2016). While the research continues, the ethical implications for engaging in robotic warfare are not a remote possibility but rather close at hand. Robots coded with a set of objectives, devoid of social morals, values or conscience, and designed with a network of artificial intelligence may have grave implications for our future. The questions are what is our response to this development in warfare as a society? How will we address the ethical issues raised in this regard?

The advent of artificial intelligence is not a new issue. Rather, in the 21st century with the development of technological advances in computing power, sensor systems, it is clear that we are closer to developing an artificial intelligence equivalent to the human brain. Kurzweil points to the topic of achieving singularity with robotics (Kurzweil, 2006, 2014). What is new is the fact that as technology advances in designing robots with self-awareness, this creates the opportunity for machines to surpass human intelligence. Thus, Kurzweil predicts that machine intelligence will become more powerful than human intelligence. While current efforts in Artificial Intelligence (AI) are aimed at developing medical mediation of disease, seizures, paralysis, and cancer; this pathway of exploration also avails itself to exploring the effects of cell-to-cell communication in the brain as well as brain-to-brain communication to enhance our sensory capabilities.

Kevin Warwick, a Professor of Cybernetics in the UK has explored the effects of implanting a device to interact with the human nervous system and the brain (Edgar, 2014). Creating cyborgs that are equipped with wireless transmitters in their

brain enables a new kind of command and control for the 21ˢᵗ Century and beyond. Robotics being designed for personal use is aimed at supporting individual medical needs but these same systems can be applied in other ways.

The advent of drones in the US military demonstrates the impact of this technology. Precision strikes have become known as part of the American lexicon as we hear of drone strikes on the news. Indeed, the DARPA Challenge raises the bar on these technologies with its robotic champion prize each year. Hubo, this year's DARPA Champion, exhibited its dexterity in climbing stairs and extending its legs (Guizzo & Ackerman, 2015). Evidence of the benefit of ambient intelligence and autonomous systems was noted by the F-16 whose automatic system, sensing its relationship with the terrain, made a rapid manoeuver to prevent the jet from crashing. In this scenario, the pilot still maintained the ability to override the system; that may not be the case for the future.

Recently, Professor Arkin of Georgia Tech demonstrated that robots are capable of deceit (Arkin, 2012). This study demonstrated the robot's capacity for adaptive learning. This is significant in that it provides an illustration of the evolutionary learning capabilities that can be utilized by a robotic system. Namely, nature provides us with biological models for mimicry and deception that may be exploited in an autonomous, unmanned system and/or robotic algorithm. Thus, it is incumbent upon us to examine the ways in which technologies are being designed and integrate anti-deception intelligence into the design. This must be part of the original design and a sensor network that is sensitive to the effects of potential deception and mimicry. Deception built into the design of autonomous, unmanned systems (e.g. drones

and/or robotics) may be our new vulnerability!

Ethics and Ambient Intelligence Technologies
While there are significant benefits for facilitating an easier lifestyle for the individual, AmI is a technology replete with ethical and privacy issues related to the management of personal information. Specifically, the ability to think and make decisions for oneself represents a sense of privacy that is fundamental to the American citizen. We concur with Tennenhouse's argument (Tennenhouse, 2000) that it is reasonable to delegate routine tasks to the level of a computing device; one should also consider the potential consequences for all decisions. We contend that humans have the responsibility to evaluate choices within the context of their own value-based beliefs. Although autonomous systems may support decision making, individuals must address the consequences for their decisions from cognitive and emotional perspectives. Decision making does not occur in a void but rather takes into consideration each of the costs and benefits as well as potential consequences for such choices. While some of these trade-offs may be modelled in an autonomous system, others may not. Further, decision making is a sign of independent thinking, personal choice, privacy and freedom. If a machine makes choices and decisions for an individual; then, the individual has yielded and lost their right of choice. Rather, they have surrendered their independence, privacy and individual freedom. Are we as a society willing to give up these rights?

Panopticon and Privacy
As AmI envelops the human experience, Philosopher Jeremy Bentham's Panopticon clearly comes into focus at a new level for surveillance. The optical system

developed for prison behavioral control was "the" great innovation for "easy and effective exercise of power" (Foucault, 1977). Panopticon projects through AmI the power of the gaze into the intimacy of living and thinking. Technology, such as AmI, is increasingly all-seeing as it is incrementally developed for the purposes of improving the human condition.

The gaze peers into the private lives of individuals to the extent that privacy boundaries are at least blurred if not erased. AmI homes can provide safety, comfort and economy on many levels (Cook, et. al., 2007). As with any technology, security, convenience, and efficiency come with tradeoffs, especially the loss of freedom. Samuel Warren and Lewis Brandeis wrote the seminal law article on privacy stating, "Everyone has the right to be left alone…" (1890). Even in antiquity Cicero stated, "What more sacred, what more strongly guarded by every holy feeling, than a man's home?" Does AmI violate the sacredness of home? Privacy? Personhood? AmI is part of the transparent tapestry of our daily lives from which we may derive benefits regarding our health and security. The question is do we want to be left alone?

Ami collects, assimilates, analyzes and interprets some of the most sensitive information on a person's behavior – the result of conscious and unconscious thinking. AmI literature indicates that a person's decision-making would be critiqued, influenced and shared-control (Verbeek, 2009). It would also have the capacity to capture relationships of spouses, significant others and children. How would we set the boundaries of relationships? Would AmI intrude and interfere with relationships? Panopticon's power of the gaze was to control prisoners through the discipline of good behavior. The objective was for prisoners to be conscious of being monitored continuously around the clock as a means of maintaining discipline. AmI could infringe on one's sense of personal freedom and prove to be unnerving in your private home.

With the recent hacking of the "secure" U. S. Government Office of Personnel Management by the Chinese, troves of personal data were captured by the Chinese giving them significant political and military power. Edward Snowden easily downloaded some of the most secure intelligence data at the NSA. How could we, as a society and nation, ensure that we are safeguarded from intrusive AmI technologies that might monitor our thoughts and relationships? How would we safeguard ourselves against potential compromise based on data collected by AmI technologies?

Technology has become so pervasive that there is no privacy, as noted by tech industry CEO Scott McNealy, regarding the Internet. Evidence of hacking, cookies, malware and other information collecting technologies by commercial entities and governments demonstrate the impact of the Internet such that all information remains exposed. How do we ensure that code is written within an ethical standard to ensure privacy for the user?

How much freedom does one have if AmI learns our behaviors, speech patterns, language, gestures, moods, etc.? How will this awareness of each individual's behavioral patterns impact the AmI machine's decision-making? AmI literature reveals that this technology senses, measures, and analyzes habits and trends. This suggests that there will be a significant increase in the AmI system's capacity to extend its learning to anticipate individual and group behaviors over time. This raises a risk regarding the potential misinterpretation of intention on its part which may have dire consequences for the individual or for society as a whole.

AmI technology must be developed through the multidisciplinary lenses of ethics. We must address AmI technologies with a

view toward preserving human rights and dignity. As AmI technology continues to move forward, we must be vigilant regarding the need to preserve individual freedoms, privacy and ethical values. As AmI systems become more intelligent and capable of anticipating patterns of behavior and interactions with others, we may lose our sense of personal freedom and independence. The AmI system has the potential to erode each individual's rights of privacy, freedom and decision making.

The nature of AmI and the ethics imbued in it are relegated to the moral nature of those who program the machines. In their book, *Moral Machines*, Wallach and Allen (2009) discuss the implications of programming intelligent machines to make moral decisions. The very process of doing so requires the programmer to define morality and consequently provide it with limits and boundaries. These machines will be relegated to the moral capacity of their creator. Due to the inevitably flawed morality of human nature, these machines will be subjected to the same moral shortcomings. Intelligent technology cannot become more moral than what is programmed to be. How do we defend against such monitoring and control?

Giordano et al. (2015) present an argument regarding the potential pre-emptive nature of evaluating human behavior in anticipation of a negative event in society. Neuroscience and advances in neurotechnology may provide a means of evaluating individuals with a propensity for violence with the aim of preserving public safety. That said there are significant ethical and legal issues related to the misuse of these approaches. While there are significant advances in brain research and neurotechnology (e.g. SPECT, MRI, fMRI, etc.), there are ethical and moral issues related to predicting violent behavior similar to that found in the film M*inority Report*. The profound issue is that we assume that a

neurotechnological approach will definitively establish a cause and effect relationship via inference from an individual's behavior, thoughts, propensities and form conclusions that may not only prove incorrect but may also prove harmful. Therefore, it is critical to evaluate the ethics of such an approach and address the considerable risks associated with such a practice.

Central to this argument, the issues of privacy, freedom of choice, decision making remain viable and ethically challenging. The question remains, how society maintains public safety and security while ensuring that this approach does not threaten our ethical values and rights to privacy and freedom.

Concluding Remarks

The convergence of Ambient Intelligence (AmI) technologies and artificial intelligence raises issues related to the ethical and moral obligation of designers in terms of how these technologies might influence and shape warfare in the future. For the military, these technologies may be used to deliberately influence our interactions with each other but they also have the potential for misinterpretation and misunderstanding of commander's intent. Nations and military organizations around the globe have been seeking the benefits of autonomous systems and robotic assets combined with artificial intelligences to change warfare and reduce the loss of human lives during combat. However, the development of such assets would extend the battlespace across all domains, land, sea, undersea, air and space and increase the need for more humans to manage all of these assets. Extending the warfighter's reach via intelligent agent networks and distributed autonomous systems facilitates the extension of the battlespace and the duration of such events. The intent is to provide a more secure global environment with a reduction in required

number of military personnel and fewer casualties on a global scale. However, there are significant societal and ethical concerns associated with this 21st century strategy. How do we protect society against feeling policed in their thoughts and actions? Will these violations of privacy and freedom in combination with advances in AmI intelligent technologies preclude the rules for a Just War?

For society, the combination of these technologies for monitoring, surveillance, and tracking each individual's behaviour and daily life violates our individual sense of privacy and individual freedom. Are we prepared to pay the price to our freedom for national and global security in the 21st Century? Where will we draw the line, if at all, in determining our own course of action? Conversely, will we be content to rely on artificially intelligent systems to dictate our thoughts, beliefs and actions? This is the question for the 21st Century.

"The world is very different now. For man holds in his mortal hands the power to abolish all forms of human poverty and all forms of human life." John Fitzgerald Kennedy

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Civilizing New Forms of Artificial Intelligence: A Review Essay of "The Impact of Ambient Intelligence Technologies on Individuals, Society and Warfare"

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The essay, "The Impact of Ambient Intelligence Technologies on Individuals, Society and Warfare," (IAITISW) offers a thoughtful, wide ranging look at the emerging intersection of multiple sensory and computational technologies that together form what is becoming known as Ambient Intelligence (AmI). The authors are commended for focusing on this emerging socio-technical phenomenon, as the effect of this technological nexus will be far reaching, manifest at the level of the individual and larger society. In perhaps the most profound decisions a society will make, AmI may influence "life and death" calculations, and may well determine who wins and who loses the wars of the future.

Before proceeding further, it may be helpful to restate the authors definition of AmI:

[E]xtends advances in computing power, artificial intelligence and distributed sensor networks...AmI technologies permeate the environment with intelligence and create a symbiotic relationship between humans and systems...AmI is comprised of networks of intelligent agents that are sensitive, responsive and adaptive to changes (e.g. temperature, lighting, etc.)p in the environment and to personal preferences...These collaborative networks of intelligent agents evaluate information, communicate with each other, as well as develop plans and make decisions (IAITISW).

As can be seen in the definition, Ambient Intelligence technologies are derivative of scores of other systems or 'systems of systems.' Given the importance of and unintended consequences associated with the growing intersection of myriad systems, this analysis of AmI may be a forerunner of more essays to come on this subject. While much of the literature surrounding IT innovation is technical in nature, this work goes farther and ponders the socio-technical-military implications of intersection and emergence.

The essay is structured around three concerns: AmI and the private citizen (a person's health care is offered as an example); AmI and war of the future (for example, the human struggle to perceive and control the battle space as intelligent machines proliferate); and the implications of AmI for society at large (for example, pondering the question what will freedom and privacy mean in an environment densely populated by AmI technologies).

One of the many strengths of IAITISW's essay is the ability of the authors to tackle a complex, emerging phenomenon, and provide illustrative examples of this emergence. The authors sketch out the possibilities for AmI to solve problems of elderly persons, many of whom live in isolation. The AmI now

coming into focus may be just the early manifestation of technologies that increase the health and wellness of the elderly. For example, the authors describe recent efforts to make cities and homes "smart", better able to provide greater health and security for vulnerable populations. They ask us to consider China's "Digital City" effort:

Today, there are more than 200 million people above the age of 60 years of age...Thus, there is a need for China to implement smart digital cities as a potential solution. Smart cities will be built with smart homes. This includes a multidisciplinary approach to monitor health, food, lifestyle, wellness and social aspects of daily life, built into the design. Medical monitoring of health will be the overlay of each of these designs aimed at addressing the elder care issue.

While the elder care example seems to portend many positive outcomes, the military section of IAITISW is less sanguine. Many readers, even those without military experience, can imagine examples wherein AmI technologies might pose a challenge to the battlefield commander and the human imperative to comply with the 'laws of war'. As has been demonstrated recently in the battlefields of Iraq, Syria, and Afghanistan, scores of semi-autonomous machines are engaged in combat operations. What is less obvious to the general public is the existence of networks of sensors that collect information, and feed this information to high powered computer systems that do the 'thinking' about the data. The rising number of netted machines, the volumes of data, and the ever increasing speed of data analytics have combined to push warfare in the direction of what the authors describe: the emergence of Artificial Intelligence (AI) and

its close cousin, AmI. The technical challenges of controlling such a complex machine system are daunting.

But rightly, IAITISW's authors express concern less with the technical challenge of assembling such a mass of machinery, than with the ethical implications of increasingly robotic warfare, connected to and informed by AmI technologies. Thankfully, these capabilities are just in their early stage; we haven't seen the full effect of AI and AmI. Thus, policy makers and the broader citizenry need not worry about these sci-fi military futures...or do they?

This essay is heady stuff. Readers may feel weighed down. And readers can perhaps ask: why bother ourselves with thinking about such problems now, why not weigh in later, after the technologies and usage patterns mature, and robotic warfare, AI and ubiquitous AmI become a reality? History of technology with its many examples of "technology out of control", would argue for early thinking and earlier intervention. If policy makers and larger society wait too long to engage issues of technological emergence, patterns of usage and development often "lock in" precluding societal intervention later. History has shown (see the theories of Paul David (QWERTY) regarding information systems, and Thomas Hughes' work on power systems and Donald McKenzie on the nuclear arms race) that emergent technological systems have a tendency to gain momentum, and usage patterns "lock in" with adverse consequences for successive generations saddled with suboptimal outcomes. For example, the development of nuclear weapons was allowed to proceed unchecked in the 1950s and soon developed a dangerous momentum that contributed to the near incineration of the world in 1962. Quickly after the Cuban Nuclear Missile Crisis restrictive controls were put in place, producing within several decades treaties that eliminated masses of

these dangerous machines. More recently, the momentum of early, flawed nuclear power plant designs came to dominate the Japanese energy industry, a momentum that was stopped only in the catastrophic tsunami of 2011 which left four reactors smoldering and large areas of country uninhabitable. Both problems were the consequence of technological "lock in," which came about when prior generations failed to intervene early when smoother, less dangerous and disruptive policy change would have been possible. By waiting so long, a window had closed, thus changing the trajectory in technological development required disaster or near disaster in order to gather the political and social consensus for new policies.

So, one might ask: is the window closing again? We are on the cusp of the emergence of a massive new set of technologies, AmI. We must grapple with the implications of this "technological progress" and try to understand the nature of the problems and challenges with these technologies. In some sense, we as society have been here before. Today's problem is akin to what our 19th century leaders faced when grappling with the Industrial Revolution: how to control and shape emergent technologies such that they ultimately serve and provide for the public good. In the phraseology of the especially insightful historian of that period, John Kasson: how did our forefathers succeed in "civilizing the machine".

Our great-grandparents "civilized" Industrial Revolution technologies by the creation of new laws and multiple regulatory agencies (e.g., Food and Drug Agency; the Environmental Protection Agency). Their success can yield some important analogies and insights germane to the problems of AmI. However, there exist some differences between *Industrial* Revolution technologies and *Information* Revolution technologies that may make 'civilizing' efforts particularly challenging.

First, unlike Industrial Age technologies such as the speeding locomotive, roaring jet aircraft, or teeming masses of automobiles belching exhaust on a cold winter day, this time around it is more difficult for a human to see and perceive many of the side effects of emerging AmI machines.

A second concern relates to the susceptibility of AmI to hacking combined with the invisibility of much AmI. Might such a dualistic nature of AmI create a threat vector through which hackers can obscure the negative effects of AmI while they threaten the security of the human who is in proximity of the AmI? For example, the authors point to computer Intrusion Protection/Detection Systems (IPS/IDS) as examples of important and emergent AmI (see IAITISW). These forms of AmI work outside and beyond the human senses, rapidly perceiving and some cases blunting the attacks of threatening computer code. But who among us would know if the IPS/IDS was itself hacked, and working against the human's best interests? For example, the infamous STUXNET attack was never perceived by either Iranian IPS/IDS systems nor the human operators, yet the attack yielded substantial damage to three dimensional, real machines.

Thirdly, these machines are increasingly "intelligent", and some are designed to learn. Society acting through wise human operators and ever vigilant government regulators can monitor these learning machines and thus intervene to control these intelligent machines, so far. But these machines will continue to learn and the question remains unanswered: what will they learn in the future? Recall that recently, Microsoft programmed a social media algorithm to observe, learn, and modify its own behavior based upon interactions on the internet. In less than a

day the MSFT bot was learning the wrong things and taking on the language of neo-Nazis it had interacted with on the internet. A similar possibility seems likely to confront intelligent, AmI learning programs. But even if AmI intelligent algorithms are not purposely misled or hacked, the question remains as to how AmI would learn ethics and norms congruent with our society. Moreover, if AmI algorithms start to learn faster than human operators and regulators can learn, which I suspect will be the case, how can we ensure human control of the machine let alone human shaping of the ethics and norms the machine will adopt?

The authors have produced a wonderfully thoughtful and future looking essay. What follows are some suggestions for future work and reading related to this topic. We need to examine again the trajectory of AmI technology, looking back before the "start date" of 1999. It might be argued that our society and our IT industry have been assembling the building blocks of AmI for decades. It may be that only in the past two decades has the momentum toward powerful and ubiquitous machines become emergent so as to allow us to identify such a thing as Ambient Intelligence.

Some writers in the field endorse the view that AmI may benefit the military by reducing personnel costs (IAITISW). I encourage readers to question the assumptions underlying such a future of cost savings. If we include the long term cyber security costs involved in AmI, both in securing the supply chain but also in the continuous monitoring and repair of cyber vulnerabilities of the supporting algorithms and network connections, the costs might be far higher than is the case today with more human intensive systems.

The IAITISW authors introduce a fascinating possibility: that AmI machines may begin to practice "Deception". This possibility is worth exploring further. AmI is uniquely positioned to "check mate" all other systems because of their position in the initial phases of any human-machine decision cycle: AmI are crucial to a correct "sensing" the environment. All the physical weapons and virtual weapons such as cyber security software would be rendered ineffective (or even traitorous?) if such systems were deceived as to the reality they confront. So, how do we protect against being deceived by our machines? Perhaps laws that limit the speed and sophistication of such 'systems of systems?'

A last couple suggestions regarding additional reading. For the benefit of readers interested in better understanding possible technological futures, I would read Kevin Kelly's "What Technology Wants" and David Egger's "The Circle." In response to the increasing automation of weaponry, several arms control groups have come together to advocate for greater human intervention and monitoring, what is termed "Meaningful Human Control." For more on this issue, I would direct readers to the United Nations Convention on Certain Conventional Weapons (UN CCW) online resources, groups found at ICRAC.org, and the International Red Cross. For additional history on the evolution of technology, consider Paul David's seminal essay explaining the origins of QWERTY; Neil Postman's, "Technopoly"; James Beniger's, "The Control Revolution." Lastly, one of my favorites, John Kasson's, "Civilizing the Machine."

Concluding Comments

IAITISW's authors are focused on a critically important nexus of technologies, Ambient Intelligence. There is no stopping the continuing emergence of AmI; the emergence of A.I. may be, as Kevin Kelly argues, a "force of nature." But a "force of

nature" can be shaped and channeled. Now is the time to shape the future of this technology; to draw policy and ethical contours for the future. Why? Because technologies have an historical tendency of gaining momentum, and it is far easier to maximize social good if thoughtful leaders engage early. To be sure, there are many positives of this technology, from the formation of new industries, new jobs, and the increased possibility that wars of the future may result in fewer humans at risk. But there are many down sides. Hopefully essays on this topic will help raise awareness of the pitfalls and prospects of a technology that is sure to shape much of how we live, work, and how our military may fight in the coming decades.

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The Lessons of World War 3

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US and Chinese warships battle at sea, firing everything from cannons to cruise missiles to lasers. Stealthy Russian and American fighter jets dogfight in the air, with robotic drones flying as their wingmen. Hackers in Shanghai and Silicon Valley duel in digital playgrounds. And fights in outer space decide who wins below on Earth.

Are these scenes from a novel or what could actually take place in the real world the day after tomorrow? The answer is both.

Senator McCain, Senator Reed, thank you and the rest of the committee for inviting me here today. I am a defense analyst, who has written nonfiction books on various emerging topics of importance to the discussions in this series, ranging from private military contractors to drones and robotics to cybersecurity. Today I'd like to present a few of the lessons from my new book Ghost Fleet: A Novel of the Next World War, which combines nonfiction style research with the fictionalized scenario of a 21st century great power conflict to explore the future of war.

Old Conflict Risks and New Stakes

Great power conflicts defined the 20th century: two world wars claimed tens of millions of lives and the "cold" war that followed shaped everything from geopolitics to sports. At the start of the 21st century, however, the ever present fear of World War III was seemingly put into our historic rearview mirror. We went from worrying about powerful states to failed states, from a focus on the threats of organized national militaries to transnational networks of individual terrorists and insurgents. Indeed, just four years ago the *New York Times* published an article arguing the era of wars between states was over and that "War Really Is Going Out of Style."

If only it would. Today, with Russian landgrabs in the Ukraine and constant flights of bombers decorated with red stars probing Europe's borders, NATO is at its highest levels of alert since the mid 1980s. In the Pacific, China built more warships and warplanes than any other nation during the last several years, while the Pentagon has announced a strategy to "offset" it with a new generation of high-tech weapons.

Wars start through any number of pathways; one world war happened through deliberate action, the other a crisis that spun out of control. In the coming decades, a war might ignite accidentally, such as by two opposing warships trading paint near a reef not even marked on a nautical chart. Or it could slow burn and erupt as a reordering of the global system in the late 2020s, the period at which China's military build up is on pace to match the US. Making either scenario more of a risk is that military planners and political leaders on all sides assume their side would be the one to win in a "short" and "sharp" fight, to use common phrases.

Let me be 100% clear, I do not think such a conflict is inevitable; though it is noteworthy that the Communist Party's official People's Daily newspaper warned

that if the US didn't change its policies in the Pacific, "A U.S.-China war is inevitable..." While this may be a bit of posturing both for a US and highly nationalist domestic audience (A 2014 poll by the Perth US-Asia center found that 74% of Chinese think their military would win in a war with the US), it illustrates further a simple but essential point: The global context is changing and what was once thinkable, and then became unthinkable, is again thinkable.

For the committee's important work, it means our planning for deterrence and warfighting must recognize these risks, and the greater stakes. To give a historic parallel, it is the difference between the challenges that the British as a dominant global power in the last century faced in many of the very same places we find ourselves today, like Afghanistan and Iraq, versus the stakes and losses of World War One and Two.

Multi-Domain Conflict

A great power conflict would be quite different from the so-called "small wars" of today that the US has grow accustomed to and, in turn, others think reveal a new American weakness. One of the key aspects is where it might take place, not in specific locations on a map like the South China sea, but in overall domains.

Unlike the Taliban, ISIS, or even Saddam Hussein's Iraq, great powers can and will fight across all the domains. This will present new threats in areas where we've had unfettered access; indeed, the last time the US fought a peer in the air or at sea was in 1945.

But a 21st century fight would also see battles for control of two new domains. The lifeblood of military communications and control now runs through space, meaning we would see humankind's first battles for the heavens. Indeed, both China and Russia have anti-satellite weapons programs. Similarly, we'd learn that "cyber

war" is far more than stealing social security numbers or email from gossipy Hollywood executives, but the takedown of the modern military nervous system and Stuxnet-style digital weapons causing physical damage. Worrisome for the US is that last year the Pentagon's weapons tester found every single major weapons program had "significant vulnerabilities" to cyber attack, while many of our newest weapons are powered by microchips increasingly designed and built by those they might face off against, opening up the risks of hardware hacks.

In both spaces, we have to focus more on building up resilience to achieve "deterrence by denial," taking away the potential fruits of any attack. This will require new innovative approaches, like networks of small, cheap satellites, rather than a small number of billion dollar points of failure, and new additions to our cybersecurity activities. This again is not merely a matter of greater spending, but being willing to explore new approaches and forgo our pattern of putting new challenges and capabilities into old boxes. For instance, there is much to learn from how Estonia went from being one of the first state victims of mass cyber attacks to one of the most secure against them, including through the creation of a Cyber Defense League.

A New Race

Since 1945, US defense planning has focused on having a qualitative edge to "overmatch" our adversaries, seeking to be a generation ahead in technology. This assumption has become baked into everything from our overall defense strategy all the way down to small unit tactics.

Yet US forces can't count on that overmatch in the future. Mass campaigns of state-linked intellectual property theft has meant we are paying much of the research and development costs of our challengers

(note the F-35 and J-31 fighter jet's similarity, for example). These challengers are also growing their own technology. China, for example, just overtook the EU in R& D spending and is on pace to match the US in five years, with new projects ranging from the world's fastest supercomputers in the civilian space to three different long range drone strike programs on the military side. And, finally, off-the-shelf technologies can be bought to rival even the most advanced tools in the US arsenal. The winner of a recent robotics test, for instance, was not a US defense contractor but a group of South Korea student engineers.

This is crucial as not just are many of our most long trusted platforms vulnerable to new classes of weapons, now in a wider array of conflict actors' hands, but an array of potentially game -changing weapons lie just ahead:

- A new generation of unmanned systems, both more diverse in size, shape, and form, but also more autonomous and more capable, meaning they can take on roles from ISR to strike, flying from anything from aircraft carriers to soldier's hands.
- Weapons that operate using not the kinetics of a fist or gunpowder driving a bullet but energy itself, ranging from electromagnetic railgun, able to fire a projectile 100 miles, to new directed energy systems that potentially reverse the cost equations of offense and defense.
- Super long-range, and hyper fast air to air and air to ground missiles and strike systems.
- Artificial Intelligence, ubiquitous sensors, Big Data, and Battle Management systems that will redefine the observe, orient, decide

and act (OODA) loop.
- 3-D printing technologies that threaten do to the current defense marketplace what the iPod did to the music industry.
- Human performance modification technologies that will reshape what is possible in the human side of war.

I would urge the committee and its staff to visit some of the various amazing government labs and facilities, from DARPA to the Office of Naval Research to Sandia to Air Force Research Lab, just to mention a few, where you can see firsthand how none of these science fiction sounding technologies are fictional.

The challenge, though, is the comparison that could be drawn between what is now or soon to be possible versus what we are actually buying today or planning to buy tomorrow. Our weapons modernization programs are too often not that modern. For example, if you start at their point of conception, most of our top 10 Programs of Record are old enough to vote, with a few actually older than me.

We too often commit to mass buys before a system is truly tested, locking in on single major programs that are "too big to fail" and actually aren't all that new. And, this dynamic shapes not just what we buy, but extends their development time, and ultimately our expectations of how much of that system we will buy decades into the future, limiting our present and future flexibility. To abuse a metaphor, the growing per unit costs of the cart drives where we steer the horse.

At the heart of this failing dynamic is that while "disruption" is a new buzzword in defense thinking today, part of the Pentagon's new outreach to Silicon Valley, we struggle with the dual meaning in the concept: We claim to aspire for the new, but to be disrupted, the outdated must also be

discarded. Amazon didn't merely pioneer online book sales, but it also ended the business of most brick and mortar bookstores.

The roadblocks to disruption exist at multiple levels, from specific weapons programs to organizational change and operating concepts. For instance, there is a long record of the government funding exciting new projects that then wither away in that space between lab and program of record because they can't supplant whatever old gear or program, factory, or internal tribe that is in the way. Indeed, there is even a term for it: the "Valley of Death." The same goes for all the new and important concepts you have heard about in these hearings over the last few weeks. To be adapted, something will have to be supplanted.

As you program for the future, ultimately what you support in the new game changers of not just programs, but also thinking, structures and organizations, what you eliminate in the old, and what you protect and nurture across that "Valley" will matter more than any single additional plane or tank squeezed into a budget line item or OCO funding. It may be the difference between the win or loss of a major war tomorrow.

The Pontiac Azteks of War

The issue, though, is not just one of pursuing new innovations, but that we too often plan for the best in the future of war, not expect the worst.

A key challenge here is our defense acquisition systems has specialized in designing, building, and buying the Pontiac Azteks of war. The Aztek, which debuted in 2001, was a car that optimistically tried to be everything — a sports car, a minivan and an SUV. Instead, it ended up over engineered, overpriced and overpromised. There is an array of Pentagon programs today with similar characteristics. We optimistically and unrealistically planned for them to be good at all types of war, but they risk being unequal to many of our new challenges.

For example, in the air, we are in the midst of buying jet fighters with shorter range than their World War II equivalents three generations back and a tanker aircraft that lacks the defensive systems for anything above a "medium threat" environment, at the very moment a potential adversary is developing longer reach to target both their bases and themselves in an air to air fight. And at sea, we are embarking on a buying program for a warship that the Navy's own tester says is "not expected to be survivable in high-intensity combat."

There are deep dangers of this kind of "fingers crossed" planning. What will it be like in the 2020s to fly a fighter jet conceived in the 1990s that happens to get in a dogfight or is called upon to do close air support? That leaders in 2015 argued such situations wouldn't happen will be little aid to that pilot. What happens if an adversary decides not to play by our rules and raises the fight above "medium threat" level? What happens to a crew that goes into battle in a ship "next expected to be survivable" for the battle?

My hope is that in helping the US military prepare for the future, this committee constantly looks to the potential worst day of the future of war, not the best.

Challenge the Assumptions

From the rise of great powers to the introduction of new classes of technology to waves of globalization, we are living through a series of sweeping changes that impact the fundamental where, when, how, and even who of war. Child soldiers, drone pilots, and hackers all now play a role in war. Still, especially given the overreach of acolytes of network-centric warfare during the last 1990s drawdown (who argued that technology would somehow solve all our problems, " lifting the fog of war"), it must be noted that

nothing changes the *why* of war — our human flaws and mistakes still drive conflict, whether it is fought with a stone or a drone.

Nor does it mean that we can ignore the historic lessons of war, where we repeatedly fall prey to what HR McMaster has described as key "myths" of war. War will never be perfect. Indeed, when military aircraft gained widespread adoption in the 1920s, a new breed of thinkers like Billy Mitchell and Giulio Douhet claimed that there would be no more need for old ground armies. Yet the need for "boots on the ground" lived on throughout the 20th century — just as it will live on into the 21st.

Such caveats are not to say that the new technologies like the tank or the airplane weren't fundamental shifts in the last century or that the dynamic shifts should be ignored in ours. If the United States wants to hold on to its grip on the top, just spending more is no longer sustainable, nor the right answer. Much as both military and civilian leaders in the British Empire had to rethink their assumptions about the world, our old assumptions need to be re-examined today.

We must be open to change across the system, from rethinking how we conduct professional military education (such as by making the war college more competitive and encouraging and rewarding more externships to diversify thinking and exposure to new technologies and concepts) to re-examining the very roles we envision for weapons. Just as the B-52 went being conceived as a strategic nuclear bomber to offering powerful close air support capabilities, we might see everything from submarines gaining new utility by becoming more akin to aircraft carriers for unmanned air and sea systems or long range strike bombers complicating enemy access denial plans by taking on roles once handled by jet fighters and AWACs and RPA controllers. Much is possible, if we allow ourselves to break free

of the status quo and experiment our way into the future.

To continue that Interwar years parallel, we will benefit from programs more akin to the Louisiana Maneuvers and Fleet Problem exercises that broke new ground and helped discover the next generation of both technology and human talent, rather than an approach that focuses on validating present capabilities and approaches and/or making allies feel better about themselves.

Any true change will be uncomfortable, of course, as there will be winners and losers in everything from the defense marketplace to personnel systems. And it is to be expected that necessary change will inevitably be resisted, sometimes for valid reasons, sometimes for reasons that have nothing to do with battlefield performance. For instance, the British not only invented the tank and used it successfully in World War I, but they carried out a series of innovative tests during the interwar years on the famous Salisbury plain that showed just how game-changing tanks could be in the next conflict. Yet the British veered away from fully adapting to the *Blitzkrieg* concept they arguably birthed, largely because of the consequences that implementing it would have had on the cherished regimental system that was at the center of British military culture. This was not just a British phenomenon; as late as 1939, the head of the U.S. Cavalry, Maj. Gen. John Knowles Herr was testifying to Congress about the superiority of horse forces and resisting the shift to mechanized units. We should be mindful of any parallels today. This resistance will sometime be direct and sometimes be behind the scenes, including by claiming never to be satisfied budget wants prevent change, when that is what should be causing it.

In this time of strategic and technologic shift, my hope is that the

committee will be constantly challenging the status quo and the underlying assumptions about what is and is not changing.

Conclusions

There are two quotes that can serve as guide posts in this effort, one looking back and one forward. The first is from the last interwar period, where Churchill may have said it best "Want of foresight, unwillingness to act when action would be simple and effective, lack of clear thinking, confusion of counsel until the emergency comes, until self-preservation strikes its jarring gong — these are the features which constitute the endless repetition of history."

The second is from a professor at China's National Defense University, arguing in a regime newspaper how his own nation should contemplate the future of war: "We must bear a third world war in mind when developing military forces."

We need to be mindful of both the lessons of the past, but also acknowledge the trends in motion and the real risks that loom in the future. That way we can take the needed steps to maintain deterrence and avoid miscalculation, and in so doing, keep the next world war where it belongs, in the realm of fiction.

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Media Content Analysis as a Methodological Primer for Quality of Life (QoL) Studies: Case of Western North Dakota

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Abstract

This article examines the usefulness and efficacy of media content analysis as a methodological primer in quality of life (QoL) studies at the community level. Specifically, the article elucidates how analysis of letters to editor and online responses to opinion articles by visitors to a newspaper's website could be used to build a fundamental understanding of QoL in a rural community, during a period of rapid social and economic transformation. Rapid increase in shale oil drilling activity and the induced secondary and supporting economic activity in other sectors, such as housing, infrastructure construction, and related services, have caused a significant socio-economic transformation in western North Dakota communities, which used to be rural and largely agricultural based. The findings of this article highlight the usefulness and importance of media content analysis as an effective mechanism to initiate an exploratory study to examine the impact of rapid shale oil development on QoL in western North Dakota. The strengths and limitations of the methodological approach and implications for further research are presented and discussed.

Keywords: *Media content analysis, quality of life, shale oil boom*

Introduction

Media content analysis is a research method that has gained wide use in studies focusing on social representations, framing, coverage of gender roles, science education, and sociocultural issues. However, the role or potential for media content analysis as a methodological primer in Quality of Life (QoL) studies, especially at the community level, is an issue that hasn't been explored. The aim of this article is to elucidate how an analysis of letters to editor and online responses to opinion articles by visitors to a newspaper's website could be used to build a fundamental understanding of QoL in a rural community during a period of rapid social and economic transformation. This article contributes to literature on community QoL and media content analysis in several ways. Most QoL studies have adopted a survey and/or open ended question based approach. However, QoL is a contextual phenomenon that varies from one community to another or from one social-economic-environmental context to another. As a result, the set of questions applicable to one community or a scenario might not be applicable to another. In such instances, this article shows how media content analysis could be used as a methodological primer to build a fundamental understanding of the QoL of the community being studied.

With the advent of the internet,

many newspapers, even at the local level, have online versions where the audience or readers can express their views, perceptions, and reactions to the news articles, thereby creating a participatory medium (Hoffman 2006) of data that could be used to initiate a research program. Using detailed and descriptive data, this article highlights and outlines the usefulness of media content analysis in the field of QoL studies, at the community level, thereby expanding the potential practical applications of the research method. In addition, the busyness and social chaos during periods of rapid economic and social transformation (such as what a community goes through during the boom period of rapid shale oil development), makes it difficult for attracting, accessing, and engaging community members. This article outlines, as a non-intrusive research method, how media content analysis is useful in such research contexts.

Western North Dakota was once characterized by small rural communities and agricultural based rural way of life. But the 2005-7 oil drilling resurgence in the Bakken shale formation in western North Dakota instigated a full scale oil boom,[1] which significantly changed the nature and context of these rural communities (Bangsund & Leistritz 2011). Shale oil development in western North Dakota typifies the use of horizontal drilling and hydraulic fracturing technology to produce oil and some natural gas in the process (hereafter referred to as shale oil development), in an agricultural based rural setting. Bakken shale play is considered one of the top three major oil producing shale plays[2] in the United States (Crowe et al. 2015) and the oil drilling resurgence positioned North Dakota as the second largest oil producing state in the United States.

No prior studies have examined the context of QoL in western North Dakota. When a research program began in 2012 to understand and examine the impact of rapid shale oil development on QoL in western North Dakota, the second wave of oil development impact literature had only just begun. There was a small amount of literature addressing QoL issues and/or social and economic impacts of shale oil or gas development (exceptions were Anderson and Theodori 2009; Brasier et al. 2011; Ruddel 2011; Jacquet 2011). These studies were centered around the Marcellus or the Barnett shale, which are predominantly gas producing shale plays. Although several general lessons could be drawn from the first wave of oil development literature in the 1970's and 1980's (see Freudenburg 1984; Krannich and Greider 1984) the underlying technological approaches examined in these studies were fundamentally different from the technologies used in modern shale oil and gas development. As a result, there was a lack of pertinent literature to guide and direct the study efforts. The fact that QoL is a contextual concept bound in the space and nature of the setting exacerbated the need to adopt a suitable methodological approach to build a primary and fundamental understanding of QoL in western North Dakota.

Several news media articles and reports from western North Dakota,

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[1] An oil boom is defined as a rapid increase in shale oil drilling activity and the induced secondary and supporting economic activity in other sectors such as housing, infrastructure

construction, related services, and the concomitant changes in social landscape.

[2] Which is different to major gas producing shale plays such as the Marcellus.

however, highlighted the numerous social and economic impacts of rapid shale oil development and concomitant rapid influx of people. Within this context the potential for using media content analysis as a methodological primer was examined. The aim of the media content analysis was to: (1) design and develop a set of open ended questions/ survey questions that would guide further study efforts; (2) identify key informants in western North Dakota as potential participants for subsequent studies; and (3) construct a preliminary understanding of QoL in the context of western North Dakota.

The city of Williston, which is located in Williams County, is considered the oil capital of North Dakota. It is colloquially referred to as "boomtown USA." The Williston Herald is one of the premier and widely read local newspapers in the area. In addition to the print edition, the paper is also made available online (www.willistonherald.com), enhancing the paper's accessibility and audience. Newspapers have a traditional role of educating and informing the public and setting agendas for public action (McAdams et al. 2004). Online visitors to the Williston Herald's website can express their views, concerns, and reactions to the articles through commenting. As a result, the online version of the newspaper presents a participatory medium (Hoffman 2006) for stakeholders to express their perceptions on the news articles. The opinion articles section comprises of columns, editorials, and letters to editor. As a preliminary study effort, 512 letters to editor, published during the period 01/01/2010 to 12/31/2012 and 3877 online comments made by visitors to the opinion article section of the online

newspaper were manually coded and analyzed. Columns and editorial news pieces were left out from the study, as the number of articles published in these sections from 2010 to 2012 required significant additional effort and time for analysis. The findings section of this article describes the data in detail and how the data guided and directed further study efforts. A qualitative and exploratory study followed the media content analysis effort and the findings are presented in Fernando and Cooley (2015). A quantitative survey was also conducted in 2014, and the findings are presently in the process of publication.

Background

In April of 1951, oil was discovered in western North Dakota in the Clarence Iverson No. 1 well in Williams County (Anderson 2011). The reserves are mainly known as the Bakken, Three Forks formation, and Tyler formation, which spread across western North Dakota, Montana, and Saskatchewan, Canada (Mason 2012). Western North Dakota has experienced booms and busts in the past with the last boom going bust in the 1980's. The area demographics and the economy have largely followed the boom and bust cycle of the oil industry. The oil industry has brought inflows of people during boom times and sent redundant workers away during its declines (Ondracek, Witwer, and Bertsch 2010).

Once the 1980's boom busted, western North Dakota became a quiet area of small communities characterized predominantly by agriculture, long cold winters, and decreasing population. But the agriculture industry in the area has been under relentless consolidation for the last few decades. Fewer larger farms mean fewer farm families and fewer

customers for rural businesses. Within this context, Rathge, Clemenson and Danielson (2002) identified issues such as: long-term county viability due to continued rural depopulation; increased travel times and decreased availability of goods and services; school consolidations and adequate healthcare; impact of out-migration of young adults causing loss of human capital; and meeting the needs of a growing elderly population, as the important topics of debate among policy-makers for the foreseeable future. But these foci have taken a dramatic swing since oil drilling in the area began to experience a resurgence during 2005-2007.

Review of Literature

Survey of literature is organized under three sections. The first section discusses content analysis, and more specifically, the use of media content analysis as a research method. The second section briefly summarizes the pertinent QoL literature at the community level. The third section provides a synopsis of oil and gas impact literature that was available when the research program began in 2012.

Content Analysis as a Methodological Approach

Content analysis is a term that represents a methodological approach used to study a broad range of 'text data' obtained from transcripts of interviews and discussions; narratives from films; TV programs and general media; open-ended survey responses; books, manuals, and other literature; and content of newspapers and magazines (Macnamara 2003; Hsieh and Shannon 2005). Content analysis can be used as either a qualitative or quantitative analytical tool. In a quantitative sense, content analysis is

employed where text data are coded into explicit categories and then described using statistics (Hsieh and Shannon 2005). This approach to content analysis is not the primary focus of this article. Hsieh and Shannon (2005) outline qualitative content analysis as a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns or structures. As a result, content analysis involves the systematic reduction of content, reducing it to more relevant and manageable bits of data (Weber 1990). Weber (1990) outlined content analysis as a research method that uses a set of procedures to make valid inferences from text. Content analysis examines data for patterns and structures, singles out the key features, develops categories, and aggregates them into perceptible constructs in order to seize meaning of communications (Gray and Densten 1998).

The development of content analysis is fundamentally connected to the development of mass media (Kohlbacher 2006). Media content analysis is a non-intrusive specialized sub-set of content analysis. Media content analysis examines the relationship between the text and its likely audience while recognizing that media content might imply different meanings to different readers and tries to determine the likely meaning of texts to audiences. The ultimate goal is to understand the deeper meanings and likely interpretations by audiences of media content, focused on popular social and economic discourses (Macnamara 2003). Shoemaker and Reese (1996) contend that understanding media content and the concomitant effects on the audience clarifies the role of mass media

and media impact on society, and helps to understand societal attitudes. Media content is an indicator of many underlying forces. By studying media content, it is possible to make inferences about the people and organizations that produce the content or about the organizational and cultural settings that contribute to its production (Shoemaker and Reese 1996). It can be a useful technique for discovering and describing the focus of individual, group, institutional, or social attention (Stemler 2001). It also allows inferences to be made, which can then be corroborated using other research methods. Additionally, media content analysis provides an empirical basis for monitoring shifts in public opinion (Stemler 2001).

In a number of situations, media content analysis is a suitable research method. Early studies such as Mathews (1910) focused on the coverage of news content: whether newspapers were devoted to coverage of religious, scientific, and literary affairs of the day, or had shifted their attention in favor of sports, gossip, and scandals. During the times of World War II, Harold Lasswell's studies of mass communication, especially propaganda, promulgated the use of media content analysis. These studies adopted a view of reality as a symbolic environment of words, images, and their meanings. These symbols when studied longitudinally are indicative of changes in reality such as shifts in predominant ideologies of society, predispositions with certain issues, and other political and social matters (Lasswell et al. 1952). More recent studies using analysis of newspaper content have focused on issues such as imbalances in coverage of early childhood education (McAdams et al.

2004), about sex and gender roles (Neuendorf 2011), coverage of science in national major daily newspapers (Pellechia 1997), how news media framing of agricultural biotechnology focuses the debate at a local level (Crawley 2007), media framing of individuals, (Amanda Knox), and the impact on positive or negative image (Freyenberger 2013), and public discourse on climate change (Kirilenko and Stepchenkova 2012).

Content analysis of newspaper publications has become a major scientific method of the analysis of public discourse (Kirilenko et al. 2012). One can view news content as the consequence of a number of antecedents. However, with the advent of the internet, channels of news media have changed. The traditional route of receiving news via a newspaper has evolved into a more digital path. An online news page might be conceived as reflecting, or being a consequence of, the news organization's selection from an array of possible stories, graphics, interactive features, and other content (Riffe, Lacy, and Fico 1998). Most news organizations now have a digital version of the newspaper that can be easily accessed from any digital reading device (Sullivan 2012). As a result, media content analysis can effectively utilize vast amounts of material already available on the 'information superhighway' (Stepchenkova 2012).

Rather than being a single method, current applications of qualitative content analysis show three distinct approaches: conventional, directed, or summative. All three approaches are used to interpret meaning from the content of text data. The major differences among the approaches are coding schemes, origins of codes, and

threats to trustworthiness. In conventional content analysis, coding categories are derived directly from the text data, where the researcher avoids using preconceived categories, instead allowing the categories and names for categories to flow from the data. Conventional content analysis is generally used with a study design that aims to describe a phenomenon. This type of design is usually appropriate when existing theory or research literature on a phenomenon is limited. Sometimes, existing theory or prior research exists about a phenomenon, however there are knowledge gaps that would benefit from further exploration and description. In these instances, the directed approach to content analysis might be useful. The aim of a directed approach is to validate or extend conceptually a theoretical framework or theory. Existing theory or research can guide the outlining of the research question, where key concepts or variables are used to construct initial coding categories. Existing literature can provide predictions about the variables of interest or about the relationships among variables there by structuring the initial coding scheme and/or relationships between codes. A summative content analysis involves counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context. Typically, a study using a summative approach to qualitative content analysis starts with identifying and quantifying certain words or content in text with the purpose of understanding the contextual use of the words or content. This quantification is an attempt not to infer meaning, but, rather to explore usage (Hsieh and Shannon 2005).

Neuendorf (2011) argues that a content analysis effort must be guided by a theoretical and conceptual backing, a plan for the scope of the investigation, and a review of past research. The researcher should conduct an exhaustive perusal of previous work on the topic when constructing the content analysis protocol, including measures that constitute a coding scheme. Thus, a careful review of past work might provide the key to a more complete research program (Neuendorf 2011). Similarly, Mayring (2000) outlines two central procedures for qualitative text analysis: inductive category development and deductive category application. Mayring's procedures in essence involves a priori design of the categories (they should not be created as the researcher progresses) and matching of a category to a passage of text; not matching of the text to a category. By starting with pre-determined categories, this increases the systematicity of qualitative analysis (Macnamara 2003).

Another major research consideration in content analysis is identifying and outlining a population of textual materials suitable to answer a particular research question. Textual population refers to a set of messages or documents such as newspaper editorials or letters to the editor. When all units in the population are considered equally informative, non- probability samples should be avoided. When units in the population are unequally informative or differ in influence, circulation, or format, the units should be selected based on whether the selected texts are relevant to the research question and help to answer it fairly (Stepchenkova 2012).

Theoretical Perspectives of Quality of Life

QoL is not a static concept that can be represented by, for example, on a

scale of one to zero, where one represents the presence of a good QoL and zero the absence of a good QoL. It's a more dynamic concept that requires a combination of quantitative, qualitative, objective, and subjective measures used to analyze original accounts, social facts, and economic indicators of the people and communities concerned. Michalos et al. (2006) outlined happiness, subjective well-being, life satisfaction, the good life, the good society, economic well-being, family well-being, and quality of work life as important concepts directly related to QoL. Felce and Perry (1995) defined QoL as "an overall general well-being that comprises objective descriptors and subjective evaluations of physical, material, social, and emotional well-being together with the extent of personal development and purposeful activity, all weighted by a personal set of values." This definition highlights the multiplicity and plurality of angles and pathways that could be used to approach and dissect the concept of QoL. As a result, Leitmann (1999) argues that there can be no universal or fully objective measure of QoL for three reasons: (1) different levels of observation (individual and group) can have conflicting outcomes; (2) diversity in the definition of QoL measures can result in different answers; and (3) contextual factors can lead to different definitions of quality. Therefore, it is difficult to construct a universally agreeable definition or a standard form of measurement of QoL (Cummins 1997). However, it is possible to agree on some general features of QoL and an approach to study QoL.

QoL can be studied in three main ways. First, QoL can be based on personal determinants such as health, education, marital status and income (including access and availability) that represent the respondent's socio-economic status, immediate experience, and well-being. The focus here is on QoL at the individual level. Second, QoL can also be envisaged as relating to places and their characteristics in terms of availability and access to factors that constitute QoL. Third, a selected combination of both individual level and place level characteristics can be employed to construct QoL (Rogerson 1999).

Since this article focuses on QoL at the community level (or as a place based characteristic), it is important to highlight and outline the factors and variables that constitute QoL at the community level. QoL at the community level denotes the livability of an area or the level of attractiveness of a community (Epley and Menon 2008). Epley and Menon (2008) claim that community QoL "represents a group of socio-economic and environmental indicators (indicators are organized around five sectors: crime, health, employment, education, and recreation) that contribute to the livability and desirability of the region." Diener and Suh (1997) contend that economic, subjective, and social indices can all shed light on communities QoL, and how specific factors influence the assessment. Besser et al. (2008) developed a factor scale composed of three items measuring residents' overall satisfaction with government services, non-governmental services, and the community in general (including the community services) to evaluate community QoL. Perdue et al. (1999) contends that primary factors affecting resident QoL are job opportunities, community services, facilities particularly related to safety and congestion, community social opportunities and involvement, and perceived community political influence

(residents influence over local political decisions). These factors highlight the features that need to be considered when studying QoL at the community level.

Impacts of Rapid Oil and Gas Development

This section summarizes the oil and gas development impact literature that was available when the present study started in 2012, to construct a theoretical outline that directed and shaped the coding scheme. Various impacts of rapid energy development have been explicated in a number of articles that fall under fields such as "social impact assessment," "social disruption hypothesis/theory," and "boomtown" literature. The basic mechanism underlying the boomtown model is the rapid growth of population that occurs as individuals move into an area to take advantage of employment opportunities (Gramling and Brabant 1986).

Gilmore and Duff (1974) argue that QoL of the entire population in an energy development region depends on two things: tangibles and intangibles. Tangibles refer to the adequacy of the goods and services available and affordable in the local service sector (including government services). The intangibles describe the morale and attitudes of the population depending on such things as adequate leisure activities, responsive government, and a supportive spirit of community. Therefore, a study on QoL during periods of rapid energy development must focus on both tangible and intangible factors. Recker (2009) also found that changes in the subjective measures (norms of reciprocity and trust) explained considerable variation in QoL during periods of economic shocks than structural measures. At the community level most effects of rapid oil and gas

development are centered around: (1) economic impacts, (2) logistical and infrastructural impacts, and (3) social impacts.

Rapid oil and gas development generates positive economic benefits in the form of increased jobs, higher pay, overall economic prosperity, tax revenues, more services, new economic opportunities for local businesses and landowners (mineral and lease rights owners), and influx of young people (Murdock and Leistritz 1979; Anderson and Theodori 2009; Brasier et al. 2011). These economic benefits contribute to an increase in the material QoL of local residents through the alleviation of economic hardship. The economic impacts of energy development derive predominantly from the efforts of interested parties to identify and to respond to the implications of development — whether as "opportunities"(to those who see the changes as positive) and/or as "threats"(to those who feel otherwise) (Freudenburg and Gramling 1992).

Overall measures of economics such as income and job creation imply the more important question of who benefits (Lovejoy and Little 1979). Lease or royalty payments in prime shale development areas of the U.S. amount to several thousand dollars per acre over a term of several years, which can amount to a significant financial payment for mineral rights owners. However, some land owners might not own the minerals under their properties. A GIS analysis undertaken by Kelsey et al. (2012) indicate that ownership of the land in the Marcellus Counties with the most drilling activity is concentrated among a relatively small share of residents and outside owners. As a result, Kelsey et al. (2012) contend that energy development

presents an economic opportunity for some residents while an environmental or QoL concern for other residents, leading to conflict within many communities (Kelsey et al. 2012).

Rapid oil and gas development also leads to several logistical challenges or impacts such as increased strain on local infrastructure including roads and housing; overwhelmed public services including health, education, and emergency services (Anderson and Theodori 2009; Jacquet 2011); traffic issues, accidents, and other safety concerns; increase in cost of living (Jacquet 2011; Brasier et al. 2011); and lack of affordable housing and concomitant outmigration of longtime residents (mostly seniors or others on fixed incomes) living in rental housing (Williamson and Kolb 2011). Small rural communities are often ill-equipped to deal with growth management challenges, as they frequently lack financial resources, professional personnel, and experience in coping with rapid change (Maki and Leistritz 1981).

The social impacts of energy development are centered around increased levels of antisocial behavior, disorder, and crime (Reynolds Jr et al. 1982); impacts to the rural landscape or biophysical environment (Alter et al. 2010); and impacts on social networks and relationships (Murdock and Leistritz 1979). Freudenburg (1986) concludes that additional social impacts can occur if new employment opportunities attract enough job seekers to lower the community's density of acquaintanceship, or the proportion of residents who know one another, thereby lessening the effectiveness of socialization and deviance control.

Methodology

The aim of the QoL research program in western North Dakota was to understand and examine the factors or characteristics that comprise QoL in the area and how a transformative event such as rapid shale oil development affects QoL. The aim of the media content analysis was to generate a fundamental understanding of QoL in western North Dakota and the impact of rapid shale oil development. Following the guidelines of Neuendorf (2011) and Mayring (2000) on how to conduct a content analysis, an extensive review of literature was undertaken to build a coding scheme and identify a set of key words, concepts, and ideas. A two directional review of literature was conducted. The pertinent context specific QoL literature was lacking while a large body of general QoL literature at the community level was available. Similarly, context specific shale oil and gas development impact literature was lacking while oil and gas impact literature was available from the 1980's or from other shale plays.

The review of QoL literature helped to outline the different variables or factors that are associated with, used to describe, or constitute QoL. These factors included monetary factors and non-monetary factors. Monetary factors include income and cost of living considerations while the non-monetary factors included a wide range of factors. The range of non-monetary factors were narrowed down to identify the pertinent QoL factors within the context of rapid shale oil development. The review of boomtown/oil and gas development literature helped to outline both positive and negative social-economic-environmental impacts of rapid shale oil development. As a result, the coding scheme was structured such that there were two broader sections. One section

comprised of key words and concepts that represented QoL variables that were presumed to be negatively affected by rapid shale oil development while the other section comprised of variables that were presumed to be positively affected by rapid shale oil development. Table two provides a summary of the coding scheme. As a result, the methodology adopted represents a directed approach as outlined by Hsieh and Shannon (2005). Subsequently, a 2x2 coding scheme emerged that constituted four different categories:

A. Monetary factors of QoL positively affected by rapid shale oil development.
B. Non-monetary factors of QoL positively affected by rapid shale oil development.
C. Monetary factors of QoL negatively affected by rapid shale oil development.
D. Non-monetary factors of QoL negatively affected by rapid shale oil development.

Each category comprised of major coding groups that are summarized in table two. Each major group consisted of several sub groups. A tri-hierarchical coding analysis was carried out to analyze the data. Firstly, using the coding scheme as a guideline, the letters to editor and the online comments were analyzed to determine whether they referred to or addressed any aspect of QoL or impacts of oil development. The letters and online comments doing so were selected for further analysis. Out of the 512 letters to the editor, 491 were chosen for further analysis (95%). Out of the 3877 online comments, 3851 were selected for further analysis (99%). Hereafter, the statistics and data in the findings and tables refer to

these 491 letters and 3851 comments.

Secondly, the selected letters and comments were open coded using the coding scheme to sort them into categories. The percentages in table one and two shows the number of letters and comments mentioning the considered QoL factors at least once. For example, economic benefits were one major group under the section of positive impacts of shale oil development. Therefore, any unit of text that referred to benefits to mineral rights owners, business owners, employees, or other parties that benefited from oil development were coded and grouped under economic benefits. Similarly, unequal distribution of economic benefits was one major group under the section of negative impacts of oil development. Hence, any units of text that referred to wage disparity between the oil industry and the rest or units of texts describing why and how certain community members didn't benefit from oil development were coded and grouped under unequal distribution of economic benefits. The groups were matched to the unit of text following the guidelines of Mayring (2000).

Thirdly, a focused coding effort was performed within the major groups and sub-groups to identify major subthemes and sub-patterns. These sub-themes and patterns were assimilated across the four categories to build an overall understanding of the impact of rapid oil development on QoL in western North Dakota.

However, during the open coding effort, pieces of content emerged that didn't fit the coding scheme. These content referred to life before oil development. As a result, there was a need to construct another set of codes, which emerged from the data using the constant comparison analysis method

(Glaser and Strauss 1967). These content were separately coded as positive and negative aspects of QoL before oil development. These codes are summarized in Table One below.

Findings

The letters to editor of Williston *Herald* and the online comments on the opinion articles presented a very interesting medium for analysis. Data analysis and the excerpts of letters and comments quoted in the findings indicate that, although not answers to a set of structured questions, these letters and comments represent the views, perspectives, and ideas of a range of stakeholders. The quotations used in the proceeding sections highlight the nature, detail, and objectivity of perspectives from the data, resulting from the content analysis effort. It is also important to note that letters and/or comments provided details about residency, gender, and age (senior resident or not) etc. there by providing detailed context to the letters and comments. All of the letters provided some details about residency and gender. In addition, most comments also provided these details. For example, an online comment stated:

I grew up here during the first boom. Left for the military when it died out, and returned 21 years later just at the beginning of this boom. Now I work in oil, this is my home and where my family is. My kids go to school here and my wife works in the local grocery store.

Many other comments also provided details about residency, type of employment (oil industry or non-oil), gender etc. Media content analysis also yielded names of several people who wrote letters and expressed their opinions about pertinent issues that comprised both longtime residents and new comers as well as both male and female. The effort yielded names of 17 people who wrote more than one letter to editor. These people were identified as key informants to start chains in a chain/referral sampling approach in the qualitative open-ended interviews that followed. Five people out of the 17 declined to participate in further studies citing personal reasons or lack of available time. Two could not be contacted as their contact information was not available.

In 11% of letters to editor and 8% of online comments, direct use of the term "quality of life" or other closely associated terms such as well-being, good life, and life satisfaction happened at least once. For example, Ryan Ogaard in a letter to editor, stated:

Nearly 3 years ago I moved to Williston, North Dakota from Minot to pursue a job opportunity that would provide me and my family with a secure quality of life… If it wasn't for living with a sense of community, I'm certain I wouldn't feel as content living in a rapidly changing (aka "booming") town that I call home. It is my hope that we continue to feel safe and secure in a changing community…There is no magic wand that can instantly improve the quality of life we all desire; however, by giving, advocating and volunteering as a community we can make a difference and give hope to those who live here so that they may look back and know they have also lived a good life.

Many letters and comments

pointed out the rapid pace of activity (generating numerous jobs within a very short time period that attracts people) and status of national economy (triggering a rapid influx of people) as the two main drivers jointly contributing towards the impacts. For example, one of the comments to an editorial noted: "some of us come from areas that have been devastated by the economic crisis…Williston is an oasis of opportunity in an otherwise dismal national crisis." Another comment from a wife of an oil field worker from Denver described:

> My husband took a job up in Williston in January after a year and a half of unemployment here in Denver. There are very few jobs anywhere...I am very grateful that he found a job in your community. This job has stopped our 6 weeks of homelessness, has provided my 3-year-old with new clothes

Another letter to the editor summarized the context of both drivers by stating:

> I feel fortunate to live in a prosperous community with a good job, a warm home and plenty to eat. I know many Americans are not as lucky as I am. But growing up in this area all my life, I also know that change can be scary and frustrating to deal with, especially when it happens as quickly as it is.

Quality of Life Before Rapid Shale Oil Development

Many letters to editor and online comments from longtime residents described and explicated the factors, conditions, and context that constituted QoL in western North Dakota before oil development. Table One summarizes the themes and the percentage of letters and comments refereeing to each theme at least once. QoL before oil development seemed the lens through which longtime residents perceived the changes created by rapid shale oil development. Therefore, it is important to understand QoL in western North Dakota before rapid oil development.

As Table One indicates, high density of acquaintance, serenity and tranquility of the surrounding environment, and high feeling of safety were the three most frequently mentioned positive non-monetary factors of QoL before shale oil development, while outmigration of young people and consolidation of public/private services were the two most frequently mentioned negative non-monetary factors. Lower pay and lack of job opportunities were the two most frequently mentioned negative monetary QoL factors before oil development.

Table One: QoL Factors Before Rapid Shale Oil Development

QoL factors positive before the boom	%[3] Letters	% Comments	QoL factors negative before the boom	% Letters	% Comments
Monetary factors			**Monetary factors**		
Low cost of living	6%	9%	Lack of economic or job opportunities	17%	22%
			Lower pay	3%	13%
			Lack of career advancement potential	1%	3%
Non-monetary factors			**Non-monetary factors**		
High density of acquaintance	27%	21%	Out-migration of young people (loss of friendships, family ties)	14%	33%
Good schools and availability of basic community services (retail store, drug store, movie theatre etc.)	4%	14%	Consolidation of public services (school closure)	8%	21%
Serenity and tranquility of the surrounding landscape	14%	36%	Aging population	6%	18%
Low level of crime and better feeling of safety	31%	37%	Closure of business services and decline in private amenities	2%	12%
Opportunity to participate in community activities	2%	4%	Lack of new investments or new housing	5%	10%
Environment based recreation opportunities (hunting, fishing, and hiking, etc.)	9%	19%			
Small country town environment	6%	11%			

Positive and Negative Monetary QoL Aspects Before Rapid Shale Oil Development

Positive monetary aspect of QoL before rapid oil development largely comprises of low cost of living as one online comment summarized "this area used to be such a nice area to live, no (sometimes) the pay wasn't great, but the cost of living was reasonable, and it was a smaller town/community, and a great place to raise a family." However, monetary aspects of the life before rapid oil development wasn't perfect. As

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[3] Percentage indicates the number of letters or comments, out of the total analyzed, stating each factor at least once.

Geene Veeder, a longtime resident and also the Executive Director of the McKenzie County Job Development Authority claims in a letter to editor:

> Just a few years ago, it was difficult, if not impossible, to attract jobs to western North Dakota. Our population had seen decades of consistent decline and it wasn't a healthy economic climate… Oil development has been a Godsend for our region, but it hasn't come without its challenges.

Another online comment described the income situation as: "During the non-boom years, exactly how much most were people making? Maybe $25,000 a year if they were lucky." Although there were no higher paying jobs or many jobs, before shale oil development, the low cost of living seems to have balanced the monetary aspects of QoL. As a result, people with established economic ties and jobs remained in the area while others, especially young people continued to leave the area.

Positive and Negative Non-Monetary QoL Aspects Before Rapid Shale Oil Development

In a letter to editor John Heiser, a longtime resident writes:

> Most of us longtime Dakotans kind of liked what we had before this extreme "boom," namely the blue sky, good roads with light traffic, an agriculturally driven economy along with modest oil activity, a good school system, relative safety from the afflictions of the rest of America, and the reasonable expectation that our rural, western

innocence was a good thing. The most valuable resource this area had is not oil, but peace and quiet...and undisturbed prairie.

In response to that letter another longtime resident commented:

> I completely agree! I have lived here my whole life as my parents originally came due to the first oil boom. I've always LOVED it here…until now. I remember when this community cared and reached out to one another. When we cared about how the town looked, and when the biggest news was the community bake sale. If I wanted a city I would have moved years ago.

The data analyzed indicates that the positive non-monetary factors of QoL in western North Dakota before oil development comprised of high feeling of safety, strong close ties that existed in the community where everyone knew each other (high degree of acquaintance), quality of the surrounding environment (serenity, tranquility, and quietness of the small country town environment), and availability of necessary resources (a grocery store, theatre, and good schools etc.). Analysis of letters and comments by people who identified them as newcomers to the area indicate that these factors are shared and considered by newcomers as well. For example, in a letter to editor, Carl Doty, who is a new resident to the area notes:

> I like to hunt, fish, camp and go four-wheeling. I do want the environment clean. I don't like traffic, waiting in lines, not being able to get a post office box or high crime rates. I like knowing my

neighbors and watching out for each other. I want to go to small and peaceful bars, coffee-shops, bakeries, mechanics and community banks as part of my routine.

In reply an online comment states:

My grandpa built the majority of houses in the Williston area in the 50's-70's and I spent many a summer in the area. It was always a peaceful farming area with just great people around. I have many good memories. My mom has just decided to leave the town, not due to money but to the fact that she doesn't know her neighbor anymore. Hard to gauge the growth being it isn't the cozy downhome place to live but we are old school and will probably have many oil wells on all the land we own before this boom is done. I feel grateful we have choices and really feel bad for all the locals who aren't as fortunate as we are. I hope Williston will remember all the seniors who have endured through the years. They are wonderful people rooted in character and hard work and I hope they won't get thrown away in this growth.

The negative aspects of QoL in western North Dakota before shale oil development, highlighted in letters and comments include outmigration of young people and concomitant aging population, consolidation of public services, and closure of businesses as one online comment outlines:

Before all this began we didn't have money to update the parks. The equipment were getting really old. Schools were thinking about merging sports teams as we didn't have enough kids. Local businesses were struggling and some of them closed down and you had to go to Minot or somewhere to get what you needed.

Analysis of the letters and comments indicate that residents feel that the QoL in the community is undergoing a period of change or transformation as a result of rapid shale oil development. The excerpt from the letter to editor by Rena Helberg, who is a longtime resident, exemplifies this point:

I appreciate people like Dan Kalil,[4] who have deep roots in this community and a history of serving the people who have been his neighbors, friends and acquaintances. I empathize with his quote "our quality of life is gone." All of us can agree that our area has experienced phenomenal, enormous, even cataclysmic changes. And these changes have happened in a very short amount of time. It is truthful that the "quality of life" that we enjoyed before the oil boom is gone… People who experience a death are told there are five stages of grief: denial, anger, bargaining, depression and acceptance. If our previous "quality of life" has died, it's actually a good thing to acknowledge and not deny that. For those of us who have to stay, who choose to stay, we will have to eventually get to that "acceptance" stage. To an optimist

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[4] A Williams County Commissioner

like me, that stage will usher in a better Williston. Think of the first and second oil booms? The people here adjusted.

Impact of Rapid Shale Oil Development on QoL

As Table Two indicates, economic benefits to different stakeholder groups was the most frequently mentioned positive monetary impact of shale oil development on QoL, while escalation in cost of living, lack of housing affordability, and wage disparity were the three most frequently mentioned negative monetary impacts of shale oil development on QoL. Additions to community amenities was the most frequently mentioned positive non-monetary impact of shale oil development on QoL, while concerns of safety, disruption to local social networks, and impacts on rural landscape were the three most frequently mentioned negative non-monetary impacts of shale oil development on QoL.[5]

Table Two: QoL Factors Impacted by Rapid Shale Oil Development

Positive impacts on QoL	% Letters	% Comments	Negative impacts on QoL	% Letters	% Comments
Monetary impacts			**Monetary impacts**		
Economic benefits to stakeholders			**Inequality in distribution of economic benefits**		
Benefits to mineral and other lease rights holders	8%	23%	Wage disparity (Oil compared to non-oil)	31%	38%
Direct or indirect job opportunities generated by increased activity	11%	27%	Lack of benefits to land owners who don't own minerals	3%	24%
Higher wages in the oil industry	2%	8%	Other community members (seniors etc.) who don't benefit	4%	17%
Enhanced business opportunities and revenue for business owners	4%	9%	**Other monetary costs**		
Economic benefits to community			Escalation in cost of living	36%	57%
Tax revenue for communities	14%	2%	Lack of housing affordability	28%	78%
Investments in community infrastructure, services, and new housing	3%	6%			

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[5] Percentage indicates the number of letters or comments, out of the total analyzed, stating each factor at least once.

Non-monetary impacts			Non-monetary impacts		
Influx of young and new residents			**Rapid influx of mostly male workers**		
Opportunities for new friends and social connections	2%	8%	Change in male-female ratio	1%	6%
In-migration of people with local roots (who grew up in the area, moved away, came back)	3%	14%	Impacts due to transient nature of workers and lack of local integration (garbage, lack of care)	15%	31%
Addition to community services			**Rapid growth in population**		
New businesses and private amenities in the community (retail, recreation, restaurants, medical)	16%	21%	Increase in crime and concerns of safety (including road safety concerns)	34%	71%
Better parks and recreational opportunities	9%	37%	Overwhelmed public services and business services (healthcare, emergency services, law enforcement, and retail etc.)	26%	43%
New schools and other public services	8%	6%	Congested or busy community environment	6%	12%
			Disruption to local social networks and relationships (density of acquaintance)	28%	61%
			Impacts due to increased industrial activity		
			Noise, dust, and disturbance to peacefulness	26%	14%
			Impacts on land, rural landscape, or biophysical environment, and concerns of pollution	15%	22%
			Impacts on environment based recreation	7%	9%

			(hiking, hunting, fishing)		
			Other Impacts		
			Outmigration of longtime residents	5%	19%

Positive Monetary Impacts of Rapid Shale Oil Development

Analyzing the contents of letters and online comments indicate that the major positive monetary impact of oil development is the economic opportunity for those stakeholders who are in a position to benefit from increased industry activity, such as mineral and other lease rights holders, landlords, business owners, and oil industry employees. For example, an online comment states: "I am from North Dakota and have a few oil wells so I LOVE it. Apparently, the ones that complain are not in any way profiting from the oil." Rapid shale oil development represents an economic opportunity that has been lacking in western North Dakota for the past few decades to attract investments, businesses, and new residents. For example, As Lloyd Omdahl, a former North Dakota lieutenant governor notes:

We welcome the new development in the North Dakota oil patch and celebrate the benefits that will enrich mineral owners, landlords, community businesses, oil companies and the state treasury…However, the negative unexpected consequences of the rapid development are becoming too serious to ignore…The development is overtaxing the infrastructure throughout the oil patch; public services are being stretched beyond capacity;

highways are being destroyed faster than they can be rebuilt; heavy oil traffic is shoving other users off the roads; schools are rushing to accommodate over-enrollment; housing, much of it inadequate, is in short supply.

Another online comment states:

I am from this state. I have a long family history here. And I am proud to say I also have a long family history of being Oil Field Trash; yes, I am proud, proud, proud of it. Yes, the oil companies pay good wages; however, most of those working on a rig or many of the jobs that support them, are from out of state, with families or loved ones to feed and care for...and quit complaining about the oil boom!

However, the positive monetary aspects are not entirely sufficient to improve the overall QoL in western North Dakota, as described in an online comment by an oil industry worker:

Everybody, including all oil workers in our area like me, want the roads safe for our children, the schools adequately funded so the kids have teachers, cooks, supporting staff and room for all the kids. Our hospital and clinics need to have the staff and the buildings to provide proper care to all of us.

Negative Monetary Impacts of Rapid Shale Oil Development

Although monetary benefits positively impact the QoL of those stakeholders who are in a position to benefit from rapid shale oil development, not all stakeholders enjoy such benefits. Many stakeholders such as non-oil industry workers, seniors, and those that don't own mineral rights express concerns about the inequality of economic benefits generated by shale oil development and rapid increase in cost of living. For example, an online comment by a longtime resident notes:

> I have seen full time workers leaving this town as they can't afford the rising rents, which non-oil jobs don't keep up with. I have lived here for over 50 years and have always been fully employed, but despite raises, they just don't keep up. People wonder why they can't find workers in the food service or retail stores around here. Bottom line is with rapidly rising cost of living here, this town needs to take an aggressive approach to increasing wages here in non-oil jobs or face many more people leaving and smaller business shutting down. You should hear the horror stories I hear from full time workers as to what financial lengths they have to do to survive here. You could devote an entire column to that problem. I'll bet 75% of the city population is not gaining wealth from this boom.

Another online comment notes:

> Why does the oil industry with all its billions of dollars matter more than those of us that have lived in this town most of our lives? So very many of us are suffering with the increase in the cost of living such as rent increases, food prices, fuel prices and even day care price increases. All our city governing body seems to be interested in is the flow of oil money that is being brought to this city but for all the dollars the city gets none of it finds its way into my pocket or those in the same predicament as I am. I have lived in this town for over 50 years but I guess that counts for nothing when I am up against the oil companies that will be here for only as long as the oil lasts. What then?

Analyzing the letters and comments indicate the escalation in cost of housing is the main driver contributing towards the increase in cost of living, especially for those living in rented housing. In a letter to editor Joy Rasmussen notes:

> [P]eople who do service jobs just can't afford to live in Williston or the surrounding area anymore. Lots of folks are not willing or ABLE to work the long, hot, cold, tiring hours required in the oil patch. And let us face it: We need waitresses, gas station attendants, clerks, CNA's, janitors, stock people and other service workers. And they need places they can afford to live and wages that will allow them to pay the upped prices.

In another letter to editor Amy Murdock from Florida, that is a wife of an oil field worker notes:

[T]he cost of rent is crazy! I recently read an ad for a five-bedroom mobile home for $8,500 per month!!! Who can afford this? No one can afford to pay these astronomical prices without compromising their family's welfare. Most could not afford to bring their families to Williston due to the cost of living. It is really sad. I appreciate North Dakota for making a better life for my family, I just wish we could be together.

In reply a long term resident noted:

Over the last year I have helped 6 friends and their families pack up and move…Because they cannot afford to live here. 17 people who worked at Walmart, grocery stores, day cares, and schools and hospitals. These families were an asset to us. Little by little we are losing what we love about this place OUR PEOPLE. I've always thought of us as a resourceful people. But how can we raise our children, work our jobs and pay day care and $2000.00 rent? How do we do this?

Analysis of letters and comments clearly indicates that increase in cost of living is having a considerable negative impact on the monetary aspects of those community members who are not in a position to benefit from oil development.

Positive Non-Monetary Impacts of Rapid Shale Oil Development

Analysis of letters and online comments indicate the positive non-monetary factors of rapid oil development include investments in community infrastructure (roads, schools, parks and recreation), incoming new businesses (retail, restaurants, and other services), and in-migration of young families. For example, an online comment states:

When we complain about all the negatives that this boom has brought we forget what is has also done for our communities. We had two grocery stores here and one closed down about five years ago. Our school population were going down and they were talking about closing and merging the middle school. This boom has given us an opportunity.

As Jim Yockim, a long term resident of Williston describes:

The many new people coming to town with their families will be part of the next generation of North Dakotans. They will pay taxes, shop in our stores and invest time and money in the future of our community. They have new energy and new ideas. They have a right and a responsibility to use those ideas to try to make this community better.

Lisa Newson, a new resident to the area notes in a letter to editor:

Williston still has its problems and there are still things that will frustrate me, but this is my home now. I may not be a local, but I've met a lot of really great people both from Williston and not from Williston. This area has some great traditions that are family oriented, the parks are getting a much needed

face lift and look excellent now, and there are still a lot of really good things about living here. I think sometimes we just need to step back and remember that there are nice things about Williston!

Negative Non-Monetary Impacts of Rapid Shale Oil Development

Analysis of the letters and comments show that the negative non-monetary factors consist of increased crime and concerns of safety; increased traffic; inaccessible or overwhelmed public (law enforcement) and business services (healthcare, retail, restaurants etc.); impacts on the land and surrounding environment; and change in the community nature and context. For example, an online comment notes: "if I wanted to sit in traffic, stand in line, look at empty store shelves, hear friends and relatives complain about ridiculously high rent, I would have stayed in a big city". Another new resident notes in a comment: "All we want is a stable life for our families, some close friends to hang out with, great schools for our kids, and a community to be proud of…we are here to stay." Rapid influx of people has swiftly increased the demand for public services (law enforcement and other city services) creating concerns of safety and one online comment describes:

> The only reason I still feel relatively safe around here is the fact that me and all of my friends, relatives and neighbors are armed and not afraid to defend ourselves. I am certainly not going to depend upon law enforcement to keep me safe, they are totally swamped and overextended just like all of the other infrastructure around here.

The QoL characteristics of the community and/or the surrounding environment for which the area was known for before rapid shale oil development, does not characterize the present busy boom town as one comment notes:

> I have been a resident of North Dakota all my life and Williston for the past 30 years. I am also saddened by all the construction and changes in our landscape. I miss seeing the livestock running in the pastures, fields of growing crops, the quiet Sunday drives and evening walks with family and friends.

Another online comment notes:

> There is a ton of our tax money, earned by all of us -the landowners, the oil field workers, the truck drivers, the police department, the sheriff's department, the restaurant owners and servers, the cna's the nurses, doctors and I could keep going. We all need to work together to get the infrastructure we need and deserve. The craziness of the oil boom is exhausting all the workers in this area. Once we feel safe on our roads with four lane hi-ways, well placed stop lights and children not living in campers with no heat we can concentrate on being a community undivided. We deserve that, all of us, the ones that are away from their families and the ones who are from the Williston area.

The letters and comments exemplify that the non-monetary characteristics of QoL in western North Dakota are changing with rapid shale oil

development. These changes were highlighted by an online comment as: "In Williston we can see it every day in our busy streets, crowded parking lots, packed stores, overcrowded schools, newly-emerging neighborhoods and the many new faces that appear in town month after month." Neighbors knowing each other in a small community setting (high degree of acquaintance) was identified as a major positive non-monetary characteristic of QoL before oil development. Analysis of letters and comments show that due to the rapid influx of people many of the social interactions and the important social aspect of "knowing my neighbor" has been significantly affected as outlined by an online comment:

> The thing is you can't always separate out the 'good' people from the 'bad' people when you are in a crowd or don't know them. They just all become 'bad' by default -- The problem is in the sheer numbers. This town was never designed nor meant to support this kind of population explosion. The unrestrained growth is what has DESTROYED Williston…Then lastly the mayor said "Williston will be a better town." I really don't think anyone who was here pre-boom believes that. My take is that Williston will just be an entirely different, much larger, and extremely poorly laid out town occupied by entirely different individuals.

The sub-themes described in the above sections helped construct several open-ended questions and development of an interview guide that was used in further study efforts. Assimilation of the

themes and patterns across the four major categories and comparing them with the themes about QoL before rapid shale oil development leads to two general conclusions:

A. The nature of (whether its positive or negative) the impact of rapid shale oil development on the monetary QoL aspects of a community member depends on their positioning in the economic/income structure and level of exposure to local inflation.

B. Rapid shale oil development has created several non-monetary positive QoL aspects (new business choices, better parks, etc.), which were believed to be lacking before oil development. However, in the process, several positive non-monetary QoL aspects (knowing their neighbor, feeling of safety, quiet environment etc.) that were valued before rapid shale oil development has been lost.

These two main points drawn from the media content analysis were examined further in the qualitative interviews that followed and are discussed in detail in Fernando and Cooley (2015).

Discussion and Future Research Implications

The detailed and descriptive data presented in the findings show that media content analysis is capable of producing outcomes and data that are comparable with other qualitative research methods such as open-ended interviews or focus groups, if the source of media is very thoughtfully selected. The findings of this

study is comparable and yielded similar results to other studies that are summarized in the literature review. Concerns of crime and safety, impacts to surrounding landscape, and disruption to local social networks were the most frequently mentioned negative impacts of shale oil development. These were common major themes in other oil and gas development impact studies such as Anderson and Theodori (2009) and Brasier et al. (2011). For example, during a study by Alter et al. (2010) participants expressed concern about the impacts on the landscape, and relatedly, their desire to live in the area. For many, the rural nature of these areas is the reason they live where they do and they feared that energy development would permanently degrade the amenities and rural QoL they've come to value (Alter et al. 2010). Therefore, the case of western North Dakota demonstrates the usefulness of media content analysis as a methodological primer in QoL studies. With many newspapers even at the local level, having an online version, which provides a participatory medium, media content analysis has the potential to be a useful methodological primer in studies focusing on QoL in other oil and gas impacted areas. The usability of this methodological approach needs to be further examined in future QoL studies, at the community level.

The directed approach used in coding the media content needs to be further discussed. Constructing a coding scheme based on literature helped guide and organize the analysis effort. However, the analysis showed that some codes that were generated through the literature were not applicable within the specific context of western North Dakota. For example, many studies focusing on the Marcellus shale highlighted concerns

of ground water pollution, fresh water use, and public health. None of the letters or online comments described concerns of ground water pollution. When concerns pertaining to impacts on the land and the surrounding environment were expressed, they were based on the impacts to aesthetic nature and recreational uses. In addition, another set of codes emerged during the data analysis process. These are highlighted in the QoL before rapid shale oil development section. Hsieh and Shannon (2005) argue that one challenge of the directed approach is failing to develop a complete understanding of the context, thus failing to identify key categories. This can result in findings that do not accurately represent the data. As a result, future research that uses media content analysis based on a directed approach needs to be adequately flexible to allow codes to emerge from the data if there is sufficient evidence to indicate that the existing coding scheme is not adequate to accommodate certain content. This can especially occur if there is lack of context specific research on the particular social-economic-environmental situation considered, such as in the case of western North Dakota.

The coding approach used in this study involved a single researcher manually coding the content. Although this approach proved sufficient within the role of media content analysis as a methodological primer, there are several ways to improve the efficiency, reliability, and validity of the approach. The reliability and internal validity of the analysis can be improved by using multiple coders and triangulation. Manually coding the content also required a lot of time and effort, and as a result, the columns and editorial articles were left out from the analysis. The

content selected for analysis requires a balance between considerations of adequacy to answer the pertinent research aims and questions and the time required for analysis. Neuendorf (2011) compares human coding and computer assisted coding (computer assisted text analysis-CATA) and argues that the efficiency of the analysis can be greatly improved by using computer assisted coding, if the designing of the coding scheme is carefully constructed.

The proposed role for media content analysis in a QoL study is as a methodological primer. The aim of the media content analysis described in this article was to build a fundamental understanding of QoL in western North Dakota to direct further study efforts. The role of media content analysis can be limited in both theory development and description of the lived experience, because both sampling and analysis procedures make the theoretical relationship between concepts difficult to infer from findings. At most, the result is concept development or model abstraction (Hsieh and Shannon 2005).

As a methodological primer, however, media content analysis has the potential to play a contributory role in a comprehensive research program. As outlined in the findings, media content analysis helps to conceptualize the primary concepts, identify key informants, and develop questioners, which are vital in directing further study efforts.

Although the Williston Herald represents one of the most widely read local newspapers in the area, the sample of people who write letters to editor and comment online is limited and can be biased based on their specific interests and viewpoints. In addition, newspapers can act as gatekeepers of media

messages. Not all the letters sent to the editor get published (Shoemaker and Reese 1996).

The blatancy of the content of some of the comments outlined in the findings, however, indicate that the anonymity allows for commenters to freely express their views and perspectives. This fact needs to be further clarified in future research by collating similar views or ideas and how they are expressed when other methodological approaches such as open ended interviews are used. Visual analysis of the answers to the open-ended questioner based qualitative study that followed the content analysis indicates that the views expressed during the interviews were not as direct as the online comments. However, a comparative analysis of the two texts were not carried out to verify this point and this is proposed for future study efforts.

Conclusion

This article examines the usefulness and efficacy of media content analysis as a methodological primer in QoL studies, at the community level. Specifically, the article elucidates how analysis of letters to editor and online responses to opinion articles by visitors to a newspaper's website could be used to build a fundamental understanding of QoL, in a rural community, during a period of rapid social and economic transformation.

The detailed and descriptive data presented shows that media content analysis is capable of producing outcomes and data that are comparable with other qualitative research methods. The proposed role of media content analysis in a QoL study is as a methodological primer. The role of media content analysis can be limited in both

theory development and description of the lived experience, because both sampling and analysis procedures make the theoretical relationship between concepts difficult to infer from findings. However, as a methodological primer, media content analysis has the potential to play a contributory role in a comprehensive research program as demonstrated by the case of western North Dakota.

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NORTHERN PLAINS ETHICS JOURNAL

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Community Section

Issues in the Ethics of Interpretation

John Helgeland

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Imagine this: You have written a hundred letters and I now have all of these in my collection. These were composed at various times in your life. One was written when your beloved grandmother passed away. Another when playing for your high school championship football team, the time your pass was intercepted and the receiver ran forty yards for the touchdown that cost your team, the winning score. And another when you were given a horse for your birthday. Another when your audition got you first chair in the trumpet section of All-State-Band. Letters and more letters: some at times of great delight, others at times of great sadness. And a few at times with little emotion of any sort.

I do not know you. But on the strength of these letters, I am asked to write an evaluation of your emotional balance for a job that requires the ultimate in steady-handedness. Fine!

Whether or not I am fond of you, I could group the "happy" letters to say that your personality is manic, nearly to the point of perpetual intoxication. As with a differing selection of "sad" letter I would have evidence to suggest that you are depressed to the point of being a danger to yourself and others. I am not making this up since these are *all* your letters. I have proven, on the basis of your own writing, that you are manic or depressed. The recipient of my evaluation will decide your future based on my research into these one hundred letters.

But you complain that I have not given an accurate or balanced view of your psyche. Others who have known you well for quite a long time think you are indeed a balanced individual who shows sadness in response to adverse events surrounding your life and cheerfulness in response to the opposite. The difference between these two outcomes is, of course, context. One might argue, that, to a large extent, we are our contexts. Certainly we are our contexts to the world outside of our head, and to interpret our letters properly requires knowledge of contexts.

Every historian is worried that some reviewers will point out when we violate that principle. One example can illustrate this point. Some historians of the evangelical sort have attempted to make the Founding Fathers of the United States into evangelical Bible-believers. Some of these people repeated the stories about the Fathers which originated at the time of the Second Great Awakening[1]. These people made the attempt to show

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[1] The Second Great Awakening (C 1820-1840) was an intense evangelical movement which has subsequently shaped American public religion. One factor explaining its emergence was the French Revolution (1789-1793) which destroyed the French monarchy, thereby uncaging fears all over the Western world that all governments were vulnerable to attacks by the forces of "reason" and revolution. In the climate of such fear, it was important for the evangelical cause to make it appear that the leaders of the newly-formed American government were allied with the evangelical and not under the sway of European intellectuals. This context was shaped by fear of such a revolution rising in America.

that, from the start, Americans all were devoted to evangelical theology and, consequentially, God rewarded their devotion, granting, victory in the Revolution.

The fact is, however, that the times when Jefferson, Washington, Franklin, and Paine were active, American "high culture" was deeply under the influence of the Enlightenment. This movement prized empirical thought following the model of the physical sciences. Accordingly, biblical reports of floating axe-heads or anyone walking on water were immediately greeted with skepticism, if not outright laughter. Same too, with stories of feeding thousands from the contents of a grocery bag.

What do you imagine that Jefferson or Franklin would say to the following account? It was said that Washington was praying, on his knees, for victory in the upcoming battle of Trenton. As Washington prayed, an aide broke into the tent with news of the British deployment of forces. So upset was Washington at the interruption in prayer that, twisting on his knees, he drew his pistol and fired it into the leg of the thoughtless aide.

Nearly everything we know of the context of Washington's demeanor suggests that this story is pure fabrication. Washington always regarded religious opinions as a strictly private matter, for example.

Interpretations of this sort violate the context of time. What was in the air at that time was scientific thinking and skepticism about any divine "adjusting" of the laws of nature. The Scottish philosopher David Hume, for example, thought that all historical reports should be evaluated on the basis of one's observations of the ways things happen in nature. For example, he would believe

that Jesus walked on water only if one has seen someone walking on water, which he himself had never seen. His concern for context was, first of all, judged by his own experience. The "laws of nature" so often mentioned in the Enlightenment were, in fact, summaries of human experiences.

Accordingly, it is all too easy to impose my experience when dealing with any historical document. Appreciation for the tendency to inflict our experiences on historic data is likely what the Enlightenment philosopher Voltaire meant by saying that history is a bag of tricks that we play on the dead.

An "unethical interpretation" is an instance of imposing one's categories and understandings on a subject to which these are foreign and perhaps irrelevant. What has happened here is that the subject is made to be the text for a sermon or a pronouncement of the "interpreter."

Not only are we likely, in our time, to play these tricks on the dead, but just ask any Roman historian what it was that made the Empire "fall." Explanations ranging anywhere from gross sexual immorality to softness produced by conversion to Christianity (see Edward Gibbon) have been employed. There various "causes" of Rome's alleged fall are often cited as supporting a corrective alternative to some of our contemporary problems. One might think of Billy Graham who in many sermons urged America to undergo an awakening as a solution to many pressing social problems which Graham thought likely would lead to America's own "fall."

Not only are societies of past centuries victims of unethical interpretations but it is to be expected that we too will be the object of context violated in both temporal or spatial categories.

A speaker at a recent conference on global warming suggested that our time would also be the object of future criticism. He could imagine a textbook two centuries hence discussing our profligate ways of dealing with oil, the ideal lubricant. This text referring to our time would have a sentence heading, "they actually burned the stuff." To you and me, of course, nothing could seem strange about standing at the pump filling our tank and burning the gasoline. We have our contexts too. To hold us responsible to some future interpretation leads to the possibility of anachronism. We have the responsibility, ethically considered, to deal with the problems and issues which are presently before us.

We have the issue of why there is importance involved with an ethical interpretation of both the past and of understanding our contemporaries correctly. We build the future on the basis of what has already taken place. Unethical interpretations lead to dangerous conclusions about what to expect from each other and about decisions involving policy.

Historians, for example, argue that their discipline is important because our experience is broadened by including narratives of past experiences under similar contexts. Often repeated is the theme, "those who do not remember the past are doomed to repeat it." If, however, the report of some particular historical event or experience is surrounded by a context different from the one we presently face, the pertinence of that event is valueless. It is perhaps dangerously misleading for forming any decision about which direction is appropriate for understanding today's situation.

Properly to guide social policy it makes a difference whether the Roman Empire fell owing to a populace totally immersed in exotic pursuits, or whether it owed to an uniformed tax policy, or if it was attacked by superior forces and defeated in battle, or, most interesting, whether it fell at all. A recent painful example was the "domino theory' which held that one defeat automatically led to another. The model for that theory, of course, was Hitler and the Third Reich. But the contexts surrounding Germany in the Twenties differed greatly from North Vietnam in the Sixties. Even though thoughtful people knew the difference, the domino theory formed the "meta-plan" for everything we hoped to do there. This theory is in disrepute nowadays especially after the disintegration (did someone say "fall?") of the Soviet Union.

To sum up these comments we then have the topic of translation. There are two kinds of translation. The most familiar is to translate from one language to another (German to English, Greek to English). A good product leaves clarity of meaning, and the reverse yields mayhem. To go from one culture to another also requires a form of translation. There are symbols and assumptions about the nature of life itself which must be explained to the second culture, especially the context. To fail to make this translation work invites hard feelings at best and perhaps war at worst.

Translating from language to language is a skill, a valuable one. Translating from culture involves societies past and present. Some important documents that fit this model are the Bible and Constitution and the Bill of Rights. Biblical interpretation requires a knowledge of societies at least two millennia distant. The American founding document, one tenth as old, also need interpretation and the Supreme

Court is given that task. "What did those verses or articles mean then and what now?" Both are vitally important, and so is the ethics of interpretation.

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Dr. John Helgeland *is the board director and founding NPEI director. He received his Ph.D. from the University of Chicago and specializes in The Early Christian Church in the Roman Empire, History of Christianity, History of Culture, and the Philosophy of History. Dr. Helgeland was instrumental in the formation of the Northern Plains Ethics Institute (NPEI), as well as the Group Decision Center (GDC) an electronic consensus-forming laboratory at NDSU. His key area of interest is "Religion and Violence."*

Legislative Travel Paid for by Lobbyists Raises Ethical Questions

John D. Olsrud
Bismarck, ND

Why would an out-of-state corporation spend thousands of dollars to send a North Dakota legislator on a trip? To answer that question, one has to understand the structure and relationships between private companies and state legislators. Corporations expect a return on their investments, and when they host legislators on trips, corporations expect to get their money's worth[1].

I had the privilege of serving as an attorney on the staff of the North Dakota Legislative Council for 40 years, the last 25 of which I was the director of the agency. I was aware of numerous trips being taken by the people I worked for, and many times I was asked not to tell anyone. I will honor those commitments in this article—no names, no specific trips. This is just an overview of what I see as an ethical problem for the legislative branch of state government in North Dakota.

During my years as Legislative Council Director, I had the duty of providing ethics training to legislators. I used to preface my presentations by saying I often heard we have no ethics problems in North Dakota. Translation: we have no one in jail for ethics violations. Perhaps the reason we have no one in jail is because legislators write their own ethics laws and rules, and care is taken to make sure nothing is done to disturb the cozy relationship between legislators and lobbyists.

Once elected to the state legislature, a person enters a world of privilege and perks unheard of by the rest of us. Suddenly, a new legislator is invited to numerous dinners and parties. Most of these dinners and parties are open gatherings, and the media sometimes covers these occasions. There have been pictures in the paper showing a freshman legislator holding a beer in one hand and a hot dog in the other. Some people see those pictures as a problem, because someone has purchased that beer and hot dog for the legislator. To me, those kinds of dinners and parties are not cause for alarm, as the money spent per person is not large and these gatherings are open to the public. The question the media should ask is who is not at those open dinners and parties? Some legislators might make an appearance and then disappear, only to go to some lavish private dinner hosted by deep pocket lobbyists. Those private dinners, away from public scrutiny, should get our attention.

State law puts limits on how much a lobbyist can spend on a legislator on a specific occasion, and anything above that amount is supposed to be reported to the Secretary of State. Lobbyists have found a

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[1] This article first appeared in the 2013 issue of the Northern Plains Ethics Journal (http://northernplainsethicsjournal.com/archive/NPEJ V1N1/archiveV1N1.html). It is reproduced here to provide context for the following articles on a North Dakota Ethics Commission.

way to avoid making those reports. If a dinner or party exceeds the cost per person allowed by state law, lobbyists simply go together, so if two or more lobbyists buy a dinner, they split the cost, and no reports are made. The smart money in the lobbying business is far too sophisticated to endanger the sponsoring corporations from getting bad publicity over these matters. So, instead of buying meals for large groups of legislators in a public setting, the smart money goes to private dinners where just a few key legislators meet with corporate sponsors for special time out of public view. Likewise, trips paid for by corporations are kept out of public view.

It should be understood this article is not addressing trips paid for with public money. Legislators attend meetings of public interest groups such as the National Conference of State Legislatures (NCSL) and the Council of State Governments (CSG). Those trips are at public expense and there is full accountability. Records of those trips are open to the public. I see no problem with those trips. In fact, I think the public is well served by investing in activities that help legislators do their jobs.

My concern is with private trips paid for by people and corporations seeking favors from legislators. It should be understood that lobbyists do not directly pay for trips by legislators. That would require a full report and the public might be upset. Instead, in order to make it impossible to follow the money on trips paid for by lobbyists, corporations launder their money through innocent-sounding nonprofit entities. Ever heard of the American Legislative Exchange Council (ALEC) or the State Legislative Leaders Foundation (SLLF)? These are private groups that are not open to public scrutiny. Rather than paying for airline tickets and hotels for legislators, corporations pay their money to nonprofit entities of this kind, and the public has no way of knowing

who is really paying for a trip taken by a North Dakota legislator. We never find out if our legislators' trips are paid for by specific lobbying groups that have particular interest in issues in North Dakota. We never hear with whom our legislators sat on long flights to China, India, Russia, and other distant venues, or whether those seating arrangements were prearranged as opportunities for specific lobbyists to spend valuable time with key legislators.

What, you may ask, are these corporate interests buying on those trips? The key word is access. A good lobbyist is going to know who has real power in the legislative process, and what these special interests want is to be able to pick up the phone, be on a first name basis, and ask for favors. A lobbyist for a pharmaceutical company once told me it is worth many thousands of dollars to his firm if he can keep certain bills from being introduced. If he cannot keep a bill from being introduced, think of the value of being able to make a single phone call to achieve desired results. If a phone call to a legislative leader will bring a commitment to see that certain legislation fails, think of the thousands of dollars in travel costs, not to mention valuable time, a corporation might save by not having to send its people to Bismarck.

If anything you have read in this article disturbs you, or if you think something will be done to limit these kinds of expenditures for our legislators, do not expect anything to change. A lobbyist once told me that if the name of his company ever appeared in the press regarding a scandal involving lobbying expenditures, that lobbyist would lose his budget for those expenditures. We will never see the internal communications lobbyists use to justify their budgets. As noted previously, corporations expect a return on their investments. And what better way to justify next year's lobbying budget than to show what a good return the

corporation got for last year's expenditures?

Lobbyists fear scandals that might get the attention of top corporate officials or, worse, stockholders. Stockholders do not want to read in the paper that their money is being spent taking North Dakota legislators on trips. If the public, especially stockholders, knew about the trips corporations are buying for legislators, those trips would end. That is why it is so important to keep those trips out of the public eye.

With North Dakota's newfound wealth, particularly from oil, decisions made by our elected representatives are going to earn the attention of corporate interests that have much to gain from valuable access to the movers and shakers in the legislative process. We are talking about big money, and big money buys the access so desired by everyone who wants something from the legislature. What is so unfortunate about this picture is that the public will never know who is buying influence under current laws.

John D. Olsrud *retired in 2007 after working as an attorney for the North Dakota Legislative Council for 40 years. The last 25 of those years he was director of the agency, and one of his duties was to provide ethics training for legislators and staff. Olsrud taught an online ethics course for five years as an adjunct professor at Bismarck State College, where he is now teaching political science courses. Olsrud has degrees in public administration and law from the University of North Dakota. He grew up in Beach, North Dakota, where his father was a Lutheran minister.*

ND Ethics

John Stern
Retired Retailer

I recently participated in a panel discussion at NDSU on whether or not ND should establish an ethics commission. It was a very interesting and enlightening discussion, with plenty of audience participation. And in the audience were several ND legislators, from both parties. ND is one of just 7 or 8 states that do not have an Ethics Commission. Five of the eight states are small states like ND, including New Hampshire, Vermont, South Dakota, and Wyoming.

The discussion started with questioning whether there was a problem in ND with ethical behavior in state government. Some examples were presented of sponsored trips for legislators and the never ending after-hours receptions and sponsored dinners for legislators, which seem to be the "grey" areas. No examples were presented of any egregious financial impropriety. But areas of potential abuse seem to be centered on the use of campaign finance funds and the sponsored trips. Currently there are no rules or laws relating to either. Anyone can raise money to finance a campaign. Donations of $200 or more have to be documented, but how the money is spent does not. While it is unlikely that any candidate for any office in ND has large amounts of money left after running a campaign for office, one can imagine how it would be possible. Perhaps a coal company, or oil pipeline company, or electric utility would like to donate a large amount to a Public Service Commission candidate. There is no rule or law that would prohibit that, and

no requirement to show how the money was spent. Theoretically, the candidate could pocket any money not spent and not violate any state rules or laws.

While there does not seem to be a problem at this time, the potential does exist for abuse. And ND does not have official commission, nor does it have any rules, relating to these issues. Or does it?

Late in our discussion, it was revealed that there is a provision in the ND Century Code (#54-35-02.8) that establishes a Legislative Ethics Committee. This section of the law states "The legislative management shall appoint an ethics committee to consider or prepare a code of ethics." It was a surprise to everyone in the room, including the legislators present. In neglecting, or refusing, to appoint an ethics committee, the legislature management has been in violation of the law (the Code says "shall appoint" not "may appoint"). I suppose our legislative leaders don't believe there is a problem, and perhaps they would have difficulty putting together a bi-partisan committee to deal with this requirement.

I would urge our legislative leaders to take this issue more seriously than they have in the past. We in ND like to think we are different than the rest of the world, but human nature doesn't really change. We are no better nor are we any worse than anyone else. Most civic organizations have a code of ethics. Our youth organizations such as the Boy Scouts and the Girl Scouts have them too. Most businesses have policies proscribing behaviors deemed contrary to

standard business ethics. The legal and medical professions have committees that deal with ethical issues. It seems to be a laudable standard in America.

I would suggest that it is time for our state leaders to address this issue. I believe that it would be better for all concerned if an independent ethics commission were appointed to develop a code of ethics for all branches of our state government. This commission could also be tasked to deal with perceived violations of the code. Certainly it would be a difficult job, one that few would want. The media have done a pretty good job of watching and reporting on our government, but in the absence of any code of ethics, I suspect that there is much that is ignored.

Would an Ethics Commission be a solution in search of a problem? If there is not a current problem with ethical behavior on the part of our government leaders, legislative, executive, or judicial, there is always the potential, as has been demonstrated time and again in other states. We are kidding ourselves to think otherwise.

John Stern *was born in Fargo. An Eagle Scout, he graduated from Dartmouth and spent a year teaching English in Thailand as a "volunteer in mission" at a Christian school. He returned to Fargo to join his family's small business, Straus Clothing. He has been very involved in civic affairs, including the local and state chambers of commerce, the Boy Scouts, the FM Symphony, Children's Village, his church, and many other organizations. Recently retired, he and his wife Sherri have 8 grandchildren.*

Transparency for the Legislative Branch

Dina Butcher
Private Citizen

North Dakota has been governed by a super-majority in the House and Senate for several legislative sessions. All state elected offices are also held by Republicans. With conservatives in control of government one could assume that there should be no problem with establishing a formal process for transparency in all branches of governance. The Century Code 54-35-02.8 provides for an ethics committee and could provide citizens with the assurance that their locally elected legislators are properly accounting for their campaign contributions from special interests as well as trips which might be paid for by non-governmental sources. The section reads:

*The legislative management, during each biennium, **shall** appoint an ethics committee to consider or prepare a legislative code of ethics. The committee may recommend legislation relating to legislative ethics. The committee shall operate according to the laws and procedures governing the operation of other legislative management interim committees.*

Legislators through the budget process review all programs and functions of state agencies and educational institutions which receive any state funding. They review the management and fiscal audits provided by the elected state auditor's office. Legislators go through the budgets of agencies and institutions presented in the Governor's budget in great detail, often questioning travel and participation in organizations by agencies and institutions even to the extent that legislation has recently been discussed to extend that oversight authority to non-governmental foundations at universities.

During recent sessions, minority members have introduced legislation calling for an ethics commission to be established similar to those in all but a few states. Each time such legislation comes forward, the main issue raised by the super-majority members is fear of such a commission being totally politicized and used to vilify members of the opposite party. With the wisdom and power which the majority has wielded in redistricting formulations and tax policy, one would assume they could make sure such a commission would not become that kind of petty forum.

Legislators are to be commended for the sacrifices they make in their personal and professional lives to be citizen legislators. The pay and per diem they receive are deserved for the intense 90 day sessions and interim duties required of them. The majority of those who serve arrive with the best of intentions to serve their constituents interests and to maintain their own moral and ethical standards.

Because legislators need to be informed about the multitude of issues that come before them, there are batteries of special interests ready to provide information and assistance. Sometimes in the rush of a session, with a campaign contribution made in the heat of running, a dinner here and

drinks there, a legislator might not even realize that influence is being pedaled. And then leadership might offer a favor to a new or loyal member to take a trip to learn more about, say trade with Taiwan or Turkey. And because the offer is laundered through leadership or a national legislative organization, one doesn't even ask who bought the ticket. An ethics commission would not preclude any of these things from happening, but it would help legislators take pause to make sure they know who is paying for their travel, contributing to their campaigns and trying to influence their votes, and that their constituents will also know that because it will be reported somewhere.

Legislative campaigns used to be run on very slim budgets, with the main "price" being paid by the candidates going door to door in their districts. However, one district candidate this year is predicting a need for $200,000 to run for office. Contributors deserve to know for what those funds are spent and if funds are left over, how they will be used.

As legislators require transparency of all the agencies and institutions under their purview, it should only be reasonable that legislators hold themselves to the same standard. The majority has a great opportunity to allay citizen concerns by using what is already in the Century Code to build upon and create that type of transparency.

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Dina Butcher, *who successfully led the recent statewide campaign to defeat Measure #1 (personhood constitutional amendment and woman's right to choose), was named 2015 Woman of the Year by the North Dakota Women's Network. She owned and operated Association Management Services, Inc., for nine years, working as a lobbyist for various agricultural interests, managing agricultural associations, and launching numerous grass roots businesses. Butcher was interim director for the National Association of Wheat Growers Foundation and regional director of North Dakota Teacher Learning Center. A former language teacher, she is a past president of the Bismarck Rotary Club.*

NORTHERN PLAINS ETHICS JOURNAL

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Student Section

*Analyzing Plato's Immortal Soul Argument
and its Compatibility with Dualism*

Andrew Wolf
Undergraduate Student
North Dakota State University

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I will argue that Plato's argument for the immortal soul is incompatible with his view of dualism. My argument is not against immortality in general, but only as it relates to the argument proposed in Book X of the *Republic*. I hope to demonstrate that would-be subscribers to Plato's argument must either (1) reject this particular argument for the immortal soul or (2) reject the Platonic conception of dualism.

Plato's argument for the immortal soul (or immortality) proceeds as follows:

P1. A thing is most damaged by the worst evil associated with it.
P2. Injustice is the worst evil associated with the soul.
P3. Not even injustice destroys the soul.
C1. Therefore, the soul cannot be destroyed; it is immortal.

P1 seems to be self-evident, for it is inherent to "the worst evil" to cause the greatest possible damage. P2, while not self-evident, is the product of Plato's continued arguments throughout the *Republic*. Refuting P2 would be a tall task and may quite possibly turn out to be a fruitless endeavor.

My issue with Plato's argument for immortality lies in P3. He claims, "If we discover something that has an evil that makes it bad but is not able to disintegrate and destroy it, [we can] *infer* that it is naturally incapable of being destroyed." [8]

Ultimately, depending on one's epistemological inclinations, this conditional statement may or may not stand as will be shown later in this work. Because we need not observe every instance of something in order to acquire knowledge about it, the inferential step seems a legitimate one. I think the error arises when Plato substitutes the soul into the above conditional statement. In doing so, he claims with a high degree of certainty (if not complete certainty) that neither injustice nor any other kind of evil is able to destroy the soul, thus C1: "Now, if the soul isn't destroyed by a single evil, whether its own or something else's, then *clearly* is must always be. And if it always is, then it is immortal." [9] Herein lies the problem, as I count myself among the many who do not see the conclusion as "clearly" as Plato does.

In order for Plato to make the claim that the soul is incapable of destruction, he merely *infers* that nothing can destroy it. Logically speaking, there is nothing invalid about this move, but there are two key points to keep in mind: (1) Aristotle had not yet put forth his system of logic when Plato wrote the *Republic*; consequently, Plato did not concern himself with validity as such. (2) More importantly, Plato's epistemological theory is more or less built upon the fundamental distinction between knowledge

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[8] Plato, 630 (609b)

[9] Ibid., 631-632 (610e).

and opinion. Whereas knowledge is set over what is, opinion is an intermediate state, inferior to knowledge but superior to ignorance.[10] One of the basic concerns with Plato's inferential jump (P3) in his argument for immortality is whether it is based in knowledge or opinion.

In order to elucidate Plato's distinction between knowledge and opinion, it will be helpful to consult his so-called "Allegory of the Cave." Plato constructs an example in which a number of lifelong prisoners are bound within a cave. These individuals have never experienced anything outside of the cave; for them, reality is constituted by their captors casting shadows upon the cave's walls. One day, a single prisoner manages to escape. When he exits the cave, he is nearly blinded by the sudden flood of daylight. After several minutes, his eyes begin to adjust and he is able to see reflections of objects (i.e., their reflections in water). As time passes, he begins to observe the objects themselves. Finally, he looks up at the sun for a brief moment and discovers that it is responsible for lighting the world around him. The prisoner is ecstatic now that he knows the truth! He decides to return to the cave and tell his fellow captives the good news. Unfortunately, he is unable to persuade them of the truth, for they are creatures of the dark and cannot conceive of a world apart from the cave.

The allegorical components of Plato's "Cave" will provide great insight into both his metaphysical and epistemological convictions. The shadows cast upon the cave's wall are equivalent to images of visible things, for they are multiple steps removed from Platonic forms. The reflections of objects that the escapee experiences outside the cave represent visible objects in Plato's metaphysical worldview. As it follows, the external world objects that

the escapee observes equate to the forms for Plato, while the sun is allegorical to the ultimate form of the "Good." With his metaphysical states established, Plato is able to construct the "divided line" image. As it follows, images of visible objects, visible objects themselves, the forms, and the Good correspond to the epistemic states of imagination, belief, thought, and understanding, respectively. With this epistemological groundwork in place, we can begin to investigate where Plato's inferential claim (P3) falls on the divided line.

Recall Plato's assertion from earlier: "If we discover something that has an evil that makes it bad but is not able to disintegrate and destroy it, [we can] infer that it is naturally incapable of being destroyed."[11] This seems like a simple enough statement, but would the ensuing inference qualify as "understanding" by Plato's standards? The answer seems to be "No." Plato defines understanding as:

> that which reason itself grasps by the power of dialectic… [Understanding] comes down to a conclusion without making use of anything visible at all, but only of forms themselves, moving on from forms to forms, and ending in forms.[12]

As Plato explains throughout the *Republic*, death is not the worst thing that can happen to a person; acting unjustly is. So, in the case of the most self-gratifying tyrant conceivable, Plato infers that the injustice of his transgressions would not have the power to destroy his soul outright. Can this be known with absolute certitude? More importantly, can this be known "without making use of anything visible at all?" When one infers that the soul is "naturally incapable of being destroyed," he or she is not

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[10] Ibid., 511-513 (478a-d).
[11] Ibid., 630 (609b).

[12] Ibid., 540 (511b-c).

reasoning by the merits of the forms alone. Simple experience – which requires "making use of anything visible at all" – may lead one to the belief that the soul cannot die while the body goes on living. In any case, it is clear that one cannot have Platonic *understanding* concerning the truth of P3. As it follows, C1 (the immortality of the soul) is *thought* at best and *opinion* at worst.

At this point, the question becomes whether the non-Platonic conception of the immortality of the soul is detrimental to Plato's argument. As I mentioned previously, Plato constructed this argument prior to the existence of Aristotelian logic. His argument for immortality very evidently hinges upon an inferential claim, but this does not render it invalid by our current understanding of logic. Valid premises can be constituted by inferential claims. For Plato, though, who holds anything short of understanding in comparatively low regard, he himself may not believe his argument adequately shows the indestructibility of the soul. (This probably helps explain why, in the *Phaedo*, he posits four additional arguments for immortality.) His argument may not measure up to his own standards, but it does measure up to ours in the present day; hence, we need to find and follow a different thread in order to debunk immortality.

Having established both Plato's immortality argument and his epistemic views, I will turn now to his conception of dualism. Historically, his argument proceeds as follows:

Pd1. The soul is superior to and distinct from the body.
Pd2. The body imprisons the soul.
Pd3. The soul is immortal.
Cd1. The soul might have existed before embodiment.

Again, I am not attempting to debunk dualism in this article – in which case I would attack Pd1 of the above argument. Rather, my intent is to show that Plato's dualism is incompatible with his immortal soul argument. As such, I will grant Pd1 as true.

The argument begins to run into trouble at Pd2. In Book X of the Republic, Plato tells the tale of Er, which essentially equates to a story of rewarding the just and punishing the unjust. Within the tale, he describes the process of reincarnation. Along the way, he talks about the "Plain of Forgetfulness" and the "River of Unheeding," both of which are designed to make disembodied souls forget about their past lives. The souls are then ensnared within bodies and sent to live their lives upon Earth. This ties back into Plato's immortality argument via P3 ("Not even injustice destroys the soul"). If a detractor of P3 claims that no one can know for sure whether injustice destroys the soul, the supporter would counter that the body could not go on living without the soul. This personal identity claim (i.e., that we are our souls) qualifies as intuitive knowledge as far as the supporter is concerned, but I am not convinced. In fact, I postulate that P3 and Pd2 are in direct contradiction to one another: How can the soul animate the body when it is simultaneously and utterly ensnared by it?

Consider the following example. A dimwitted farmer (obviously not from North Dakota) notices that all of his lettuce plants are being chewed up. He decides to investigate and discovers that a fugitive rabbit is responsible. The farmer tries everything to get rid of the rabbit – poison, shotgun shells, dynamite; you name it – but the rabbit continues to eat his lettuce. As the farmer's mental sanity wanes, he begins throwing random objects he finds around the farmstead into the garden. "Maybe the rabbit will be thrown off by a change of scenery," he thinks to himself. His neighbor, a compassionate man, decides to help out the

farmer by placing a rabbit trap in his garden one night. When the farmer returns the next morning, he remarks, "I don't remember putting this metal-box-thing in here, but I'll try anything to get rid of that rabbit. Maybe this final change of scenery will make him leave." Another day passes, and when the farmer again returns to the garden, he finds the fugitive rabbit caught in the "metal-box-thing." "Oh, I get it," the farmer says, "This metal-box-thing is a trap! I would've never figured that out had the rabbit not gotten stuck in here!"

Very evidently, the farmer is a confused man. He believes that the rabbit's presence in the 'metal-box-thing' is what turns it into a rabbit trap. This is simply not true. To cite Aristotelian causes, the rabbit's presence does not have anything to do with the trap's formal cause ("What kind of thing is it?"). The rabbit does, however, seem to play a role in the trap's final cause ("What is the thing's purpose?"), for a rabbit trap is intended to trap rabbits. So, what is the takeaway from all of this? The dualist states that the soul is trapped in the body. The dualist also states that the soul cannot be destroyed while the body goes on living. However, it seems counterintuitive that the soul is entrapped by the very thing it supposedly animates, as this characteristic is found seemingly nowhere else in reality. (Consider this: If entity X has the power to animate entity Y, it is self-evident that X has more causal power than Y. How, then, could Y entrap X?) I have constructed my argument below:

Px1. The soul is superior to and distinct from the body (Pd1 from above).
Px2. The soul cannot be destroyed while the body goes on existing. (Dualism)
Cx1. Therefore, the soul must be responsible for animating the body.
Px3. The body imprisons the soul (Pd2). (Dualism)

Px4. If the body imprisons the soul, then the body must have more causal power than the soul.
Px5. If the body has more causal power than the soul, then Cx1 is false.
Px6. If Cx1 is false, then P3 ('Not even injustice destroys the soul.') cannot be known definitively.
Px7. If P3 cannot be known definitively, then Px2 may or may not be true.
Cx2. Therefore, C1 ('The soul cannot be destroyed; it is immortal.') is not definitively true. The soul may or may not be immortal.

With this argument in place, deciding whether or not the soul can be destroyed while the body goes on existing becomes a matter of subjective inclination. Moreover, it shifts the discussion into the realm of personal identity, which is beyond the scope of this article.

This argument also produces an unexpected fallacy for Plato's argument for immortality. In his argument for dualism, Pd3 ("The soul is immortal") is the obvious derivative of C1 ("The soul cannot be destroyed; it is immortal"). As I have demonstrated, however, Plato's immortality argument is built upon the dualistic premise Pd1 ("The soul is superior to and distinct from the body"). Thus, Plato's immortality argument circles back to his dualism argument which circles back to his immortality argument! It is a subtle move, but as I have previously mentioned, it is getting less and less surprising that Plato posits additional arguments for the immortality of the soul in his post-*Republic* writings.

In conclusion, Plato's argument for the immortality of the soul in the context of his dualistic worldview does not entail that the soul is definitively immortal. In addition, Plato's arguments for immortality and for dualism are subtly circular in relation to one another. To be sure, Plato's self-imposed

epistemic standards make an argument for immortality a tall task in the first place. As I have argued, however, Plato's argument contradicts itself in multiple places even if those standards are lowered. Nevertheless, the immortality of the soul remains a live option, and Plato's further arguments in the *Phaedo* deserve analyses of equivalent or even greater depth to the one given in this article. After all, it is a matter of life and death.

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Should Classical Music Concerts Reform to Attract New Audiences?

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Introduction

Declining audience for classical music concerts have been brought to attention at various times by experts in the music field. One reason for this decrease in attendance is due to the aging of the present audience (Kolb, 2000; Asia, 2010). Another reason is, classical music, from its early Stages, focused on the elite and educated. Hence, it was shaped to cater to the requirements and tastes of that particular group. As a result, classical music is struggling to attract new audience for concerts due to its focus on a very specific audience. Therefore, trying to attract new young audiences has been seen as a solution for the continuity of classical music concerts (Kotler & Scheff, 1997). However, research conducted on attracting new audiences for classical music concerts highlights certain perceived educational and social barriers to future participation by young first-time attendees (Dobson & Pitts, 2011) such as lack of musical knowledge, unfamiliarity with concert etiquette, and reluctance to replace other leisure activities with classical music concerts (Kolb, 2000; Dobson, 2010). In order to attract new audience, the present elements of classical music might require a reformation, restructuring, and reevaluation. Therefore, the paper focuses on understanding classically trained young audiences' perspectives on classical music concerts, and the possibilities for changing the current concert etiquettes and introducing mainstream cultural elements to classical concerts in hopes of providing an alternative for increasing future classical music concert attendance.

Methodology

This paper is written based on ten face to face interviews. Students from the Music Industry program in a Midwestern University were selected under purposive method and snowballing method. The interviews were conducted in the lower level lounge area of the Arts building of the university. The participants were asked twelve open ended questions and follow up questions as necessary. The interviews lasted for about 15 to 30 minutes. All the interviews were recorded using a recording device with the consent of the participants.

Literature Review

According Asia, recently published articles have highlighted the current unhealthy status of classical music concerts (2010). The articles report that the audience for classical music concerts is declining rapidly. One critical reason highlighted for this circumstance is an aging audience which represents a majority of the present audience (Asia, 2010). Between the years 1982 and 1997, the representation of younger age groups has dramatically declined. During this same time period, the representation of age group of 50-59 has increased from 1 percent to 4.9 percent. By 2001, this age group (50-59) accounted for 19.5 percent of the total attendees at classical music concerts, although they were only 14.6 percent of the population (Kolb, 2001). Therefore, sustaining and attracting young audience to fill the void has become crucial for the future

continuation of classical music concerts (Kotler & Scheff, 1997).

Barlow and Shibli (2007) suggest two options to address the issue of declining audience under market penetration strategy. The first option is coming up with new strategies to attract non-concert attendees, and the second option is making the current attendees more frequent and re-attracting audiences that have not attended concerts for some time (Barlow and Shibli, 2007). Since the early days, classical music concerts attracted and catered to an intellectual audience that belonged to the upper and middle class (Levine, 1988). A higher level of education was a common trait among the regular classical music audience (Kolb, 2000; ter Bogt et al., 2011). Even the first-time attendees of both Kolb (2000) and Dobson (2010) studies noticed that classical music concert audience possessed a better understanding of the performed music. As Kolb's (2001) study shows, a person who graduated from high school has a 4.3 percent lower possibility of attending classical music concerts, compared to a person who graduated from college. Another study by Roe (1992) reports, that high school students prefer classical music if they are academically successful and intend to achieve higher educational goals in life. On the contrary, the same study reveals that students with lower educational ambitions develop a taste towards music such as heavy metal (Roe, 1992). A later study by Tanner, Asbridge, & Wortley (2008) concluded that, many students who were academically successful and aimed for accomplishing higher goals adopt cultural traits that they believe are necessary for their intended status destination. The process reverses for the low ambitious group (Tanner, Asbridge, & Wortley, 2008). Since education is an important aspect of becoming acclimated with classical music, Kolb (2000) suggests attracting university students and college graduates as potential future audience.

Contrary to Kolb's suggestion, non-music majors identified that their lack of knowledge in music as a hindrance to becoming a part of the audience, even though they belonged to the educated (Kolb, 2000). Lack of understanding and unfamiliarity with classical music was a common trait among many non-attendees. They fear that their inability to understand may accentuate them as philistine or outsiders and doubt that they will enjoy the concert (Barlow & Shibli, 2007). Some students, who attended classical music concerts for the first time, expressed their lack of knowledge on concert etiquette, such as when to applaud, to express audience appreciation for a performance. Baker (2000) says the unstated laws of the concert hall can be perceived as unwelcoming by the first time attendees. Not only when to clap but what to wear is also a risk a first-time attendee has to take compared to a regular concert attendee who is accustomed to the etiquettes of the concert hall (Baker, 2000). The participants of the Dobson study encountered discomfort because of the level of enthusiasm audiences displayed and not knowing that they were allowed not to appreciate a piece of music if they felt undeserving (Dobson, 2010). Since attracting young, first-time attendees seemed more challenging than Kolb suggested, attracting audiences who have developed a taste for classical music may at least reduce the degree of unfamiliarity experienced in the concert hall. According to a study by Brown et al. (2002), shows that 10 to 15 percent Americans have expressed a close or moderately close relationship to classical music but only 5 to 7.5 percent expressed a preference to attend classical music concerts. If prior knowledge is essential to fully comprehend classical music as highlighted by first-time attendees, this particular non-attending group who has a preference for classical music can be a

potential future audience.

Another study conducted involving non-music undergraduate students shows that the participants preferred more modern styles and genres compared to classical music (Woody & Burns, 2001; Tanner, Asbridge, & Wortley, 2008). Prior to many technological advancements, classical music was considered "timeless." Yet with time, the expectations and requirements of the younger generation have changed as many other genres and styles have become popular integrating other art forms and modern stage techniques, compared to classical music concerts (Kolb, 2000). The younger generation's experiences related to popular music concerts is vastly different compared to classical music concert experience. Every aspect of popular music concerts from stage effects to performer appearances are aimed at the emotions of the young people. The audience is expected to express their emotions freely and interact with the music and the other audience members actively as a crucial aspect of the setting of a popular music concert. On the other hand, classical music is not produced to fulfill any entertainment aspect but rather for laid back listening purposes where the stage is visually and technically unattractive (Kolb, 2001). Therefore, despite the availability of such music through digital media, popular music concerts continue to attract younger audience because of its informal and social interaction aspects (Frith, 1996). Many first time attendees of the Kolb study (2000) claimed that they were willing to attend classical music concerts in the future. Yet, the participants were not willing to attend concerts sacrificing their other extracurricular activities (Kolb, 2000).

Thus, attracting young generation suggests changing the traditional concerts to suit the various requirements of a younger generation (Kolb, 2000). A study by Kotler and Scheff (1997) suggest that reforms in classical music concerts are essential for the future existence of the genre. The researchers further suggest that these changes can occur in the internal structure, the way of conducting business, and even in the general operational strategies (Kotler & Scheff, 1997). Both Baker (2000) and Kolb (2000) in their studies take a similar stance supporting easing the boundaries of classical music experience. However, as Preece (2001) believes, attempts to reform may result in changing the traditional aspect of classical music concert into a highly commercialized medium in the hope of attracting the younger generation and such attempts may adversely affect the present concert goers, driving them away from the halls. This paper attempts to understand the perspective of classically trained young audience of reforming the classical music concerts.

Results and Findings

Classical versus Popular

Many participants acknowledged that apart from attending classical music concerts, they also attend popular music concerts. The majority even admitted that they prefer popular music more in comparison to classical music. One of the main points of the participants was that classical music has become obsolete in comparison to many other genres available in society. They viewed that as a discouraging factor for current and new young audiences who have grown up listening and attending contemporary popular music.

Participant 7: I definitely think people like what's appealing to their ear, what sounds good, and what everybody else likes. So it is more like, people won't talk about classical music much anymore unless you are studying or and if you learn about it in you music classes or when you are like in middle

school or elementary school you might learn about it, but you'll probably forget about it about it after a while.

Another factor highlighted by the participants was the absence of lyrics in classical music compared to popular music. They thought the absence of lyrics makes classical music difficult to understand by the non-attendees. According to Dobson and Pitts' (2011) research, popular music is predominantly narrative or conveys a message. This feature allows the listener to understand the music in relation to lyrics further facilitating how the listener responds to the music emotionally and physically (Dobson &Pitts, 2011). Participant 5's comment supported this idea: "I mean I think obviously lyrics can help sometimes because you hear directly."

Participant 1 suggested that the absence of lyrics can be substituted with conductor descriptions prior to the music being performed: "Often the director might give a brief background before they perform it. That puts a picture in the audiences head. So I think that helps." Although lyrics are considered important to understanding the music, Participant 5 thought that lyrics were not essential to appreciate music, "I sometimes just like to listen to an orchestra or just strings. I think music can be just as powerful without lyrics." Participant 2 thought that some lyrics fail to convey a meaningful message.

Participant 2: If you listen to like the lyrics as way back, then lyrics it was way better. They had meaning, they had purpose for the lyrics. Now they are just words. Just like 'what are you trying to say.' You know you are just throwing words out there and have nothing in it.

Apart from lyrics, participants also mentioned about the length of classical music pieces. In general, classical music pieces are longer compared to popular music pieces which follow a simple verse-chorus structure. The participants of the Kolb (2000) study who attended the Pops Classical Music Concert said that they can only focus for about ten minutes listening to a single piece. These participants also expressed satisfaction, because pieces selected for the relevant concert were short. The current study participants also said they get easily distracted and lose focus when the pieces are lengthy.

Participant 1: If I had to choose what I dislike most in classical music concerts, it would be the music itself. It's so relaxing like it often puts me to sleep in a good way. So, it gets kind of long at some points.

Then they were asked whether the pieces with four movements should be reduced to one or two movements. The participants were not in favor of that idea because they found that having more movements is interesting based especially on different rhythmic, melodic, and harmonic changes. Instead of limiting to one or two movements, the participants wished to have short intermissions between the piece which would allow the audience to relax and stretch. They assumed that this strategy would help them to get back their focus and enjoy the rest of the piece.

Participant 5: I mean it's never fun to not like hear the conclusion of a piece. It's just like having like a good intermission where people can try to get up and walk around or like. But I do not know if it would work, but I suppose may be you could try like instead of having like a big 15 minute intermission also may be like try like

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just a little like short ones where people can like get up, get their blood pumped, and then like just stand up and move a little bit and then like "all right let's go again."

Other than length, participants made comments about the pieces selected for concerts and the program order. Many participants complained that they have attended concerts where almost all the pieces are slow in tempo. Participant 6 said, "I have gone to some places where they only play very slow pieces like start to finish. I think variety adds lot to it. It makes better for me personally." Participant 10 supported participant 6's idea as follows.

I think just a good mix of like lots of different things. Sometimes it bothers me when it's always like romantic stuff and they always keep playing the same style. Just mixing more 20th century, mixing more baroque, mixing a little bit of everything.

They sought variety rather than conforming to a similar slow type of music. Many of them preferred fast music with key changes. The participants also said they would like to listen to classical music pieces that are not popular and unfamiliar. They said most of the time they hear the same pieces from the same composers, but it is time to unravel the other music from the known composers as well as the unknown.

Participant 7: I definitely feel like sometimes they over play certain pieces. You know what I mean like there's like lot of Bach played or lot of Beethoven or lot of like you know strict Mozart pieces that are super popular that everybody knows. They do not show or shed light on the other pieces that people do not know.

Some participants suggested variety could be introduced by organizing concerts with collaboration of other classical music ensembles. They thought combining orchestra, wind ensemble, choir, and even jazz band would add variety to a concert and appeal to audiences with different tastes and preferences. One of the participants shared a high school choir experience that resonated the above idea.

I like most types of music. I am pretty much a across the board person. I like types of classical stuff and then I also love lots of pop or folk type of music. It [orchestra, band, and choir] could be an interesting way to try to grab new people to like understand a more classical approach to popular music. In my high school we have a pops concert every spring and it's like all the choirs pick numbers and they do popular music and like arrangements and then small groups can try out. And it's a nice way for, an outlet I think for people who that's not their type of music, it's a way to get them into seeing it in a more classical style.

All participants thought incorporating popular music into classical music concerts would also add variety. They suggested that performing music from movies or arranging popular music to classical ensembles would draw a young audience and increase attendance. Participants think playing music known to the younger audience would reduce the unfamiliarity of the music being performed and keep them interested throughout the concert. Many participants said that the whole concert does not have to be based on movies or popular music, but adding one or two pieces would add variety and modernity the young audience desires.

Participant 3: I am already going but may be pieces that I can relate to may be stuff like that. I mean that's the thing. You do not need the entire program to be those songs it can be one song and you can have the rest in classical. It's just those little things that get someone excited to show up and hear and that kind of thing.

Kolb's study (2000) identified absences of stage techniques as a negative factor in classical music concerts, and that absence created a languid feeling. Similarly, many participants of the current study believed that incorporating visuals concurrently to the music would fill the void created by not having lyrics. If lyrics are an essential aspect to the inexperienced concert goer, it can be addressed by having graphics to enhance the musical ideas conveyed by the music. The participants also thought having visuals to follow, in addition to the music, would sustain the audience's attention.

Participant 2: May be that could at least give them something to be looking. Music majors understand the music not just by hearing it they understand exactly what's going on. But those non-music majors they are not really ear trained to that much. It might attract some people.

Two participants of the current study said that they have attended a concert which provided such visuals to follow. Both of them viewed that addition as positive and preferred similar repetition in the future.

Participant 8: I remember back in, I think it was like 2012 or 2013 there was a concert Dr. [ ] was the director of that had a projector for all the music they were playing. And it was really cool. I do not know how long it took to put that

together if it was pre-made before the performance or anything like that. I thought it was really cool. So if they are to implement something like that, that would be pretty cool.

One participant said, he preferred restricting visuals for one or two pieces as it might be a distraction for the audience who are there only to listen.

Participant 10: Sometimes it gets a little distracting for me when I see that. Like I am more there not to look I am more there to listen. So I do not mind if I am in a seat where I can't see that. That works. Because I am kind of there to hear but I think sometimes it's effective too. So may be just little dozes of that but not like all the time.

Concert Hall Etiquette Training
As Barlow and Shibli (2007) state, non-attenders fear that they will not enjoy themselves, because they lack understanding and familiarity with the subject, which might result in feeling alienated, inferior, and disinterested. As a solution to the latter, the participants of the current study suggested that schooling and introducing students from a young age is appropriate. They thought this strategy would help develop a taste for classical music as well as reduce the anxiety experienced by first-time attendees in the concert hall. Participant 8 suggested the following idea.

I think having like a class where they are introduced to a lot of that stuff and how to look at it and how to listen to it. I think that would be really good for other people to have to may be gain a better appreciation for things.

The participants of the current study restated the idea about unfamiliarity of

concert etiquettes and how it can influence the consciousness of a first time attendee as mentioned in the literature review. Many of the participants of this study possessed a significant understanding of the behavioral patterns and rules of conduct followed in a concert hall. As discussed in the previous section, many of the participants were schooled in classical music from their childhood through parents, school, and present college education. They all acknowledged the fact that this training has made them comfortable in the concert hall and that it can be unfamiliar territory for many newcomers who have not mastered the accepted norms and rules.

Affirming to this idea, some participants shared their experiences from childhood where they were introduced to the classical concert hall by their parents or school and thus introduced into the norms and rules of conduct. They believe that similar training, especially through the school system, can educate young students about concert etiquette, regardless of whether they choose to attend classical music concerts in the future or not.

Participant 5: I guess I am not sure as much for college students. I know like it's obviously always easier if you can get people knowing about it when they are younger. Because I know like when I was in elementary school one time we literary one of our field trips was the orchestra hall. They put on like a concert at like 11 o'clock. It was four schools. So it's like we were able to kind of go during a school day. It was a field trip. We dressed up and went to orchestra hall for the day. So it was kind of a fun little thing for like a lot of kids who like didn't necessarily may be do choir, band, orchestra, we all went together. So it's kind of like an even playing field. I mean may be exposing

students from a younger age. It would grab people more. Because like they get to grow up learning about it instead of just trying to like jump into a different style and setting.

Apart from educating students from an earlier stage, educating new audiences before the concert about etiquette was suggested by the participants. In Kolb's study (2000) participants revealed that they were not certain when to applaud. Participant 4 also had a similar opinion about audience members. "Maybe some people like, why cannot I clap right now... because I am a Music major I understand and that make sense to me." To address the issue, the current study participants said that educating the audiences, especially about applauding before a concert, is appropriate to minimize any embarrassment or confusion caused by unfamiliarity.

Participant 10: I know a lot of people do not know that going in though. They do not know when to clap and when you are not supposed to clap. I think that might be appropriate in some situations education people before a concert about clapping. Kind of suggest you do not clap during these parts because it's a whole set and stuff like that. Because I know a lot of people just do not know that.

If the audience is not educated prior to the beginning of the concert, the only solution available for them is to blindly follow the other audience members. A similar idea is mentioned in Dobson and Pitts' (2011) study. They mention that frequent attendance at classical music concerts and fellow audience members can help new attendees to assimilate into concert hall etiquettes.

Participant 5 compared classical music applauding practices to jazz music.

The participant commented how the audience is allowed to clap after a solo performance in jazz performances. Similarly, there are times that audiences want to applaud in classical music concerts if they feel that a certain section of the performance deserves appraising but would suppress such behavior in order to comply with the etiquettes.

Participant 5: But I know it can be very intimidating for people who aren't used to it. Because it's like even I sometimes find up that I like, I want to clap here but I know I shouldn't. And then it's like it's effective like when I see other types of music. Like when I see jazz sometimes I am like oh yea I can clap basically whenever I want.

A similar comment was made by a participant of the Dobson (2010) study comparing other popular music styles where the audience is allowed to applaud when musicians enter after an instrumental introduction or when a singer sings the first verse of a song.

Another suggestion was to continue to have program notes or conductor introductions for each piece to give an overall idea about the selected pieces. The participants thought these suggestions would eliminate the idea of a completely unfamiliar experience by new attendees in the concert hall.

Despite the aforementioned suggestions, as the Crawford et al. (2014) study reveals, regular audience members expect other audience members to follow the norm and rules of conduct regardless of their familiarity and education level. Even many participants of the study expressed lower preference to changing the "traditional" etiquette practices followed in the concert hall. As Small (1987) writes, classical music is a way of affirming middle class life which included self-discipline and diligence.

Participant 9: I think for me it's more of a respect where you should clap when you need to you should only cheer when you need and not like randomly in the middle or like you obviously hear some random coughs you couldn't hold back go ahead and cough. Because I ran through like someone cracking their knuckles right in the middle of the performance and I was like "why would you do that?" It makes your focus go away from the performance to that person.

Similar comments supported the above quote question of whether the participants really embraced the traditional etiquettes sincerely as appropriate or it is deeply ingrained in them that they feared to deviate from the tradition as they have only experienced classical music performances in a well-structured manner. Some participant comments suggested signs of a quandary between continuing the tradition and introducing changes to comply with the socio-demographic changes. Participant 7 stated, "I think I am kind of like to have that structure and stuff but at the same time I think that it's good to have new ideas and innovation you know." Yet, none of them viewed eating, drinking, and talking as welcomed additions, because they all thought that it would be distracting, disturbing, and disrespectful.

Eating and Drinking and Talking
Eating, drinking, and talking were allowed during the times of Haydn and Mozart symphonies. During the time of Wagner the audience was expected to be quiet, and reverently listen to the music (Burkholder & Grout, 2010). These trends continued ever since in the classical concert hall while the popular music venues continued to allow the audiences to socialize

as they desired. Since then as Blake (1997) says, classical music has had difficulty attracting audiences due to lack of entertainment. As most of the participants revealed, their peers prefer popular music concerts primarily due to less formality as well as the possibility of social interaction allowed in such venues. Kolb (2001), and Preece (2001), also support this idea, indicating that the gulf between the performer and the audience has alienated the younger generations who have witnessed concerts with social interaction. As Maitland (2000) explains, audience development strategies are essential to bridge the growing gap between the audience and the music. Therefore, easing the formality and norms of the classical concert halls can be predicted as solutions to increase the attendance of new attendees as well as a way of catering to the current young concert attendees who admit to being engaged in both highbrow music and popular music. Kotler and Scheff (1997) propose audience development and reform strategies to reduce formality and ease classical etiquette by organizing concerts allowing audience members to eat, drink, and socialize while the performances are in progress. The researchers have declared that these changes have proven to increase audience attendance in relation to the revival of the Sacramento Philharmonic Orchestra in their marketing management textbook (Sigurjonsson, 2010). The audience development strategies to save the orchestra from bankruptcy involved conducting concerts under different themes. "Jeans and Beer" and "Mocha and Mozart" allowed the audience members to snack during the performance and drink coffee, respectively, as they pleased. When the participants of the current study were questioned about allowing food and talking in the classical concert hall, many thought it would distract audience attention as well as disrupt the focus of the players.

Participant 3: Having someone eating nachos next to you, you know the crunching noise kind of takes away from the entire experience of the compositions. I feel like there is a time and a place for those types of things. But I do not feel like orchestral music and different classical pieces or wind ensembles are really the place for that.

The participants also commented on how such behavior will disrespect the music as well as the performers who have invested time, talent, and their emotions to practice the music and present the music to the audience.

Participant 2: These performers' they are really working hard putting their heart and soul into everything. And if people like bring food or anything that's definitely just disrespectful. Drinking water is just fine but if you are actually bringing like a whole lunch with you. I think it's more of showing the performers more respect. You know they are putting their time and putting a performance out of their schedule.

All of the participants disagreed on allowing food or talking inside the concert hall. Some participants agreed to allow water bottles in the concert hall. As Ashworth et al. (1999) and another article called *Culture on demand* (FreshMind, 2007) highlight, participant interaction is important to engage a broader audience. Although some participants commented that classical music venues lack social interaction, they were reluctant to introduce that missing aspect to the traditional concert venue.

Participant 10: I think it should stay kind of this classical experience. It's different from other forms of music

performances people would see I think. There's some value in keeping with the tradition a little bit.

Preece (2001) raises similar concerns about lowering the standards of classical music concerts in the hope of attracting a new audience, which might remove the sense of authenticity expected by the current concert attendance. Current participants also expressed skepticism that reforming classical music concert procedure as a novelty can be rejected by the older audience, consequently reducing this group's attendance.

Participant 3: It [change] would definitely appeal to people that are not so much into classical type of music. But as far as it goes for like the older generation that actually like it [classical concerts] to be like that [changes] be frowned upon by them. So you would be kind of losing a group of interest, but then you would be gaining one as well.

As mentioned before, although Kotler and Scheff's audience development strategies increased audience attendance and generated higher income and reveal that the reforms to traditional concert procedure is "smooth, simple, and problem free," the rising question is to what degree the quality and aesthetics of traditional nature is preserved (Sigurjonsson, 2010: 267). The latter concern might be governing the hesitation expressed by the participants in relation to introducing food and drinks inside the concert hall.

Dress Code

Dress is another part of classical etiquette which enhances the formality of the event. According to Griffiths (2011), concert attire "is a valuable visual cue to an individual's attitudes" (30). Considering that highbrow culture catered to the middle class,

dressing appropriately to showcase their class is an expected practice built into our culture. Kolb's study (2000) reveals that the students preferred dressing formally for the concerts. Even after 15 years from Kolb's study, the current study participants expressed similar opinions about the concert attire. Many participants held the notion that dressing formally is appropriate especially if it is an off campus event. As many participants have noticed, audiences wear causal clothing for on campus concerts. None of the participants supported the idea of allowing audiences to attend in any type of clothing of their choice such as ripped clothes and night wear. Two of the participants specifically mentioned that night clothing is not at all accepted even for an on campus concert. The lowest they were willing to accept was smart casual clothing for concerts outside of campus.

Participant 4: I have only attended classical music concerts here on campus but if you see an orchestra somewhere else you will need to be dressed like formal. I guess that could be a reason too. And then for the formal thing, I guess maybe not dressing so formal. It's not like you are going to come in your PJ's, I mean come on. Like a regular dress code will be appropriate.

Although amusement is attached participant comments in relation to dress, it also exemplifies that maintaining standards are important and expected from the classical music audiences.

Discussion and Conclusion

The current study results reaffirmed that having a basic knowledge about classical music and familiarity of classical music etiquette is necessary to fully comprehend and enjoy the music. It can be suggested that introducing children to classical music from

a younger age would develop a taste for the particular genre. Similarly exposing to classical music concert hall at a younger age would reduce the discomfort encountered by inexperienced audiences. Parents and schools can work together in introducing children to classical music and classical music concert hall at a younger age. This application would take a longer time to generate a significant amount of audience members for classical music concerts. Yet, this strategy would create a dedicated audience members to ensure the existence of classical music concerts.

Changing current classical music concert etiquette was not preferred by the participants of the current study. Instead, they wanted to conform to the traditional etiquettes practiced that originated during the Wagnerian era. Without reforming the present procedural practices of classical music concerts, the participants suggested probable additions that can be implemented without further due. The suggestions included, playing fast, unheard music from different periods, giving short breaks between long pieces, playing movie and popular music, collaborating work including all classical ensembles, incorporating modern stage techniques, educating about rules of the concert hall, continue to have program notes and conductor introductions about music, allowing water bottles in the concert hall, and allowing smart casual clothing for concerts outside the campus. These proposals can be applied to attract new younger audiences who are more accustomed to popular music. However, the sample size is not sufficient to come to definite conclusions. More studies on large scales should be conducted to make definitive assertions.

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