Catherine McGowan

Human Information Behavior – LIS 17:610:510:92

What do you meme?

Digital Social Information Sharing and Optional Validity

"Thus we should not call anybody reasonable who believed something in despite of scientific evidence." –Ludwig Wittgenstein

The Internet is a modern tool for humans to share bad information quickly. Humans presently interact within digital social worlds on a daily basis, arguably on an hourly basis. Within these digital social worlds, individuals can create information, consume information, and share information. All types of information are easily recorded in momentary flashes, often constrained by the limitations of character count, recorded video time-length, the frame size for a photograph, or the visibility of the total content in one glance, without the need to scroll to see more. When an individual interacts within any one of the various digital social worlds available, there is an implication that humans have evolved (or, perhaps, devolved) to a space where we attempt to iterate the biggest messages on the smallest scales. The vastness, or power, of a message is quantifiable, predicated by common digital measures, viz.: Likes, Shares, Comments, and Retweets. In other words, information is now available, most commonly, in bite-sized packages, widely referred to as memes. While many researchers dedicate time to identifying information behavior, the types of information that are sought, and what that means for

the development of knowledge, I am proposing that knowledge is not sought after or acquired consciously when interacting in a digital social world. Rather, the intent is to interact socially. In this paper, I will explore why the modern, information-seeking human will consume bad information, digest it, and then regurgitate it for others to consume. Before I can begin to unravel why an individual would share bad information, I will define and present an example of what bad information is. I will meditate on observations of modern human information behavior relative to individual epistemological processing, trust, and how information has the *option* of validity through the exploration of bad information.

"So here the sentence 'I know…' expresses the readiness to believe certain things."

–L.W.

What is bad information? The term *bad* can have many connotations. There can be an implied malicious intent, meaning the intention to cause harm, and it can loosely mean that something is inferior or is of poor quality. In relation to the examples I will present and focus on here, I will define *bad information* as follows: worthless, not valid. Bad information is best shared in well-defined packages. The design of the package must be simple and easy to share. When the package design is simple to understand and easy to share, it has the potential to become viral, or shared so frequently that a large majority of users encounter it. One format that is designed for easy sharing is the Internet meme.

What is a meme? Merriam-Webster defines it as: an idea, behavior, style, or usage that spreads from person to person within a culture. James Black (2006) explores memes

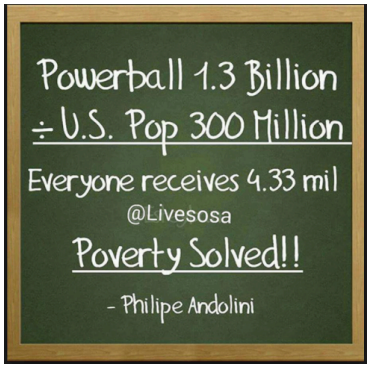
and their effect on truthiness or validity within digital social worlds. “A meme is an idea, like a gene, that can replicate and evolve. It is a basic unit of cultural information that can be transferred from one person to another.” (Black, p. 2) Memes are compact and powerful messaging mediums. They often include a photo and a brief written message. An image combined with a brief message offers easy consumption. It allows a user to happen upon it, read it, and understand it with great expedience. It can be consumed quickly and simultaneously connect deeply with the information consumer, and speed is key here in order for a meme to survive the fast exchange of thoughts, information, and ideas in the culture of digital social worlds. These characteristics are important for increasing the possibility of viral sharing.

Black explains that memes can push a story through the public sphere regardless of validity (Black, 2006). He also offers a few observations on how memes can create a connection with the user. His meme connection development elements are: Experience, Emotional Connection, Fear/Bribery, Censorship, and Distinction (Black, p. 9). Each element offers the user a means for connecting to the compact message within the meme. Designing a meme that can connect to the past experience, tug at emotional strings, incite a sense of fear, intentionally leave out information that could offer a sense of validity for the message, or present a message as if it is coming from a higher authority is the key to a powerful meme. It is here that we can see how Black is acknowledging the meme message intent. The intent can be malicious, and the user will not be aware. A user can innocently circulate a meme that qualifies as bad information. If sharing becomes viral, this can be poisonous to information integrity. “An individual misinformation meme can take hold and become part of the public knowledge if the majority accepts it.” (Black, p.

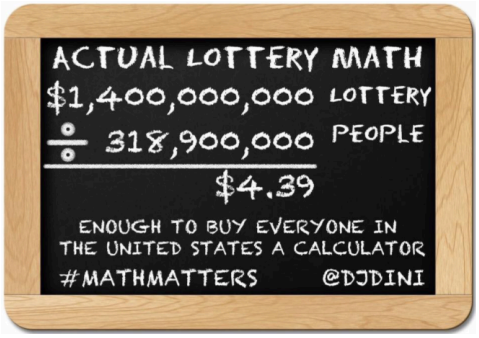
12). To summarize, memes can be designed with an intended message, and this message can be valid or invalid. If a user can identify a connection to the meme, then she can have the desire to share it. But, before messages can be explored in more detail, I want to further explore the design.

The design of a meme fits perfectly within the digital worlds we participate in. The average human consumes, creates, and shares information through our modern digital worlds, or Social Networking Sites. These worlds have prescribed windows, intentionally designed constraints to communicate within. The prescribed constraints can be: character limit, photo frame size, or visible text screen size (meaning one must click or scroll to see more). These structural constraints force the individual to create content within the box, so the message must be succinct enough to fit within the frame but loud enough to grab the eyes and ears of as many users as possible. The vastness, or the reach, of the message of a meme can be measured in quantifiable terms within the Social Networking Site that it is shared within. These measurable terms are: Likes, Comments, Shares, Retweets, etc. The higher the counts for any of these, the wider the reach, and the more the message is consumed, digested, and then shared. So, what happens when bad information meets the format of a meme?

In the early part January 2016, the Lottery Powerball jackpot had cleared over one billion dollars. The jackpot had not been hit by anyone in weeks, and the fever to win was spreading and intensifying. Even I can personally recall that my friends and co-workers were discussing what they would do with the money if they were the lucky person to beat the odds of one in two hundred million and win the jackpot. In the height of this lottery-fever, this meme began to circulate:



This meme was shared countless times, enough to consider that it hit levels considered to be viral. Within a few weeks of this original lottery-math-meme came this, lesser-known meme:



Every smart phone has a calculator, so why was the first meme shared so widely, and so quickly, with blatantly bad math? Is the average social media user terrible at math, or is there more behind why anyone is sharing bad information so freely?

"The truth of my statements is the test of my understanding of these statements." –L.W.

Merriam-Webster Dictionary defines epistemology as the study or a theory of the nature and grounds of knowledge, especially with reference to its limits and validity. Ludwig Wittgenstein explores knowledge in his journal collection called *On Certainty*. He spends much of his thoughts surrounding how to navigate validity, certainty, and the meaning behind what it is to know something. He is reacting specifically to the work of George Edward Moore, but the concepts he is reacting to spread wide across philosophy and epistemology, stretching back to Descartes. The point of contention for Wittgenstein is his predecessors' reliance on skepticism and doubt.

> "But I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false." (Wittgenstein, p. 15e)

If something can be doubted, can you prove its validity? At which point is it knowable at all? He chooses to bypass this reliance on doubt, because the thoughts are circuitous in nature. To require that all knowable things must be proven is impossible. One could spend the rest of their existence trying to prove why their hand is their hand, or if it is even a hand at all. Wittgenstein focuses on the language that is used. To point to an object and identify it as a tree has a different meaning from pointing to an object that is shaped like a tree and stating that one knows it is a tree.

> "One says 'I know' when one is ready to give compelling grounds. 'I know' relates to a possibility of demonstrating the truth. Whether someone knows something can come to light, assuming that he is convinced of it. But if what he believes is of such a kind that the grounds that he can give are no surer than his

> assertion, then he cannot say that he knows that he believes." (Wittgenstein, p. 32e)

How does one know that a tree is a tree? Or how is one certain that it is a tree? Wittgenstein identifies that there is a large base of knowledge that humans learn as children. While we are learning to develop language we are learning to identify objects, to identify physical things, things one can point to and call by a name. Consider what these things are, as they begin at very benign, simple stages. A child learns the parts of a human by learning what a hand is, an eye, a mouth, or a nose. The child is strictly taught the word and where it is. The key to this basic level of learning is to train the child to point to the correct physical part of her body when the word is called out. The child is learning the word and the definition of the word simultaneously.

> "The child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system of what is believed, and in that system some things stand unshakeably [sic] fast and some are more or less liable to shift. What stands fast does so, not because it is intrinsically obvious or convincing; it is rather held fast by what lies around it. (Wittgenstein, p. 21e)

As young children are developing, there is a deep sense of trust that is forming, immediately from the start. The child is building trust in the acceptance of information from parents, family, and teachers without an initial ability to ask a question or doubt what she is learning. The child trusts that a nose is a nose and a hand is a hand. Consider the learning process behind colors, a more complex knowledge comprehension. The word for a specific color, for example, is *green*. Green is a color attribute of objects. The word is green, and the color that our eyes interpret represents the word. So, I then learn that

grass is an example of an object that is green. I have learned what the physical object grass is called, I have learned what grass looks like, and now I have learned that the color of grass is green. I have learned examples of green. I have not learned why green is green, or why green could possibly not be green. I have learned what it is, and I am to accept that information; I am to trust that information.

> "We teach a child 'that is your hand', not 'that is perhaps [or 'probably'] your hand'. That is how a child learns the innumerable language-games that are concerned with this hand. An investigation or question, 'whether this is really a hand' never occurs to him. Nor, on the other hand, does he learn that he *knows* that this is a hand." (Wittgenstein, p. 48e)

The significance here is to acknowledge that as children we are raised to rely on trust to accept information as fact. Our innate openness to forming trust comes in handy when interacting in digital worlds.

> "I learned an enormous amount and accepted it on human authority, and then I found some things confirmed or disconfirmed by my own experience. In general I take as true what is found in text-books, of geography for example. Why? I say: All these facts have been confirmed a hundred times over. But how do I know that? What is my evidence for it? I have a world-picture. Is it true or false? Above all it is the substratum of all my enquiring and asserting." (Wittgenstein, p. 23e)

"The child learns by believing the adult. Doubt comes after belief." –L.W.

In *The Image*, Kenneth E. Boulding discusses human information behavior and the development of knowledge as an activity that is very personal and specific to the individual. The individual is creating an understanding of the world, as she knows it relative to her self, relative to her experiences. Through these experiences, she is creating an *image* of the world, as she knows it. These experiences come with messages that an individual receives, processes, and applies to the existing image of her world, as she knows it. These messages that she is receiving shape her image.

> "We must distinguish carefully between the image and the messages that reach it. The messages consist of *information* in the sense that they are structured experiences. *The meaning of a message is the change which is produces in the image.*" (Boulding, p. 7)

This image is continuously evolving as new experiences bring new thoughts and new visions to consider. It is malleable through the act of experience and processing new messages. A new experience may affirm a belief that is already held and another may challenge what is held. The shape of the image can remain or change.

Boulding describes this image not of factual knowledge but a value system. The differentiation he makes here is important. The storage of facts in an individual's mind has the implication that there is proven validity, truth. It means that unless there is scientific evidence to disprove its validity, it cannot be changed through the evolving, continuous flow of experience. "What this means is that for any individual organism or organization, there are no such things as 'facts.' There are only messages filtered through a changeable value system." (Boulding, p. 14) He is challenging the traditional goal of epistemology with the insertion of knowledge as a value system rather than a factual

database. There are some parallels here to Wittgenstein's work in *On Certainty*, because of the improbability of proving all knowledge that one claims to have. Demonstrating scientific evidence for all knowable things is circuitous—there is no reachable end. Experiences that reinforce elements of a value system can give an individual a greater sense of certainty of a topic and what she sees of it, but this not the same as proving its validity.

This means that the development of personal knowledge is unique to the individual. There are two avenues to discuss what this implies. The first is a bit more direct in relation to experience. For example, my friend could have knowledge that fire is hot because he stuck his hand in a fire, felt the pain of burning his own skin, and can now know that fire is hot and that it can cause pain. On the other hand, someone could have told me the phrase fire is hot, but I have not physically come into contact with it. Now, I can choose to believe this statement someone said to me, and I could even go so far as recite this line to others, but I have not had the physical experience of burning my skin in the heat of the fire to know the pain it can cause, and thus, I have a different personal connection to this bit of information or knowledge than my friend.

The second avenue is focused more on the selfishness of knowledge and the acquisition of knowledge. I can choose information that I wish to seek out, to consume, and retain because of what I feel like I can relate to or what feels important to me. There is an emotional connection to this knowledge. I know how to prepare myself food, because I often feel hungry and need to satiate that desire. I have learned this, because it is important to me to satiate the desire. But, what if I did not have the pains of hunger? If cooking food were only for the purpose of satiating hunger, why would I need to know

how to do it if I did not ever feel hungry? I could choose not to learn how to cook, because it was not relevant to me. Acknowledging selfish desires aids in identifying how types of individuals can be constructed, or at least, why they exist. I can like certain types of food, specific types of athletic sports, a particular genre of books I enjoy to read, and certain type of music. These may not be academic levels of information, but they are bits of information related to me and my existence and my experience within the world, as I know it. I know these things, and I relate to these things—they are part of what defines who I am. So, not only would I want to learn more about those topics that I know, but I might also take interest in finding other humans who share similar interests or knowledge bases.

"Yet my convictions do form a system, a structure." –L.W.

Social Networking Sites were created to connect humans. The relationships between information behavior and Social Networking Sites typically are researched with the intent to identify the types of information that are sought and the methods used to seek them (Khoo, 2014). Khoo explores the types of information digital users interact with and he does qualify that the user can have a certain unconsciousness to the fact that she is interacting with information within Social Networking Sites. His concerns are in the realm of garnering an understanding of human information behavior within the worlds of Social Networking Sites when these sites are constantly evolving. There is not a fixed atmosphere to observe within, yet, and this poses a challenge to drawing

conclusions on observable behavior. Khoo offers an overview of what Social Networking Sites are by design.

> "Social media is a broad concept covering a wide range of Internet applications that support social communication between individuals (whether direct or indirect, synchronous or asynchronous), with an emphasis on:
>
> - interaction between users (i.e. conversation or dialogue),
> - user-generated contents, and
> - building of online relationships and communities." (Khoo, p. 76)

For example, the design of Facebook originated with the intent to connect college students. Users would create profiles, and they had to be linked to a college or university e-mail address. This made a user's first visible and potential connection or relationship with another user easily identifiable: the name of the university he or she attends. The user profile is the first place to make a statement, to project or express an individual's identity to the digital world she is participating in. This information ranges from birth date, occupation, physical location, education, interests, and favorite forms of entertainment such as movies, music, and books. This is a summary of who the user is. It is simultaneously the first opportunity for a user to express who she is and provides a quick, condensed download for other users to digest and get a sense of who that person is. "The user-generated content reflects information behavior, but also contains information that users can search for, browse, and consume." (Khoo, 76) It is here where there is an initial moment to determine if two people share common interests for a possible connection. Furthermore, this connection point can lead to a sense of trust.

> "Users create a richly detailed profile based on their personal preferences, likes and dislikes, photographs and personal details. Respondents are fully aware that a social network is based on information sharing and that revealing necessary information for it to be useful to them and to the other community members is important to the social network (Acquisit and Gross, 2006)." (Mital et al, p. 486)

Sharing means caring; sharing means openness to developing trust.

Mital et al dive a little deeper than Khoo to identify or acknowledge the relationships that users make within Social Networking Sites. Perhaps all users are joining Facebook for the potential of information exchange and not just social exchange, but if there is only focus on the content of what the users are exchanging not much can be learned of the behavioral observations. These users are developing relationships with other users; the sharing of information is a conversational exchange. "Relationships can cover the sharing, delivery or exchange of a wide variety of resources, including information. Thus, relationships can be characterized by their content." (Mital et al, p. 486) The expression of the self means participation within the social network. The exchange of self-expression can foster relationships.

Facebook has evolved over the years to where it now offers many opportunities for expression. A user can write a post to share thoughts with other users within their network. She can share a photo or a video. She can Like or Comment on another user's post, and likewise, those users and Like or Comment on her posts. These are all opportunities for self-expression. A user can connect with this self-expression, and both individuals can experience a sense of finding a reflection of their own in another, frequently defined as an *echo chamber*. The importance of acknowledging moments of

self-expression, reflection, or even the phenomenon of echo chambers is to point out that users are creating profiles and making connections for the experience of social exchange. These social exchanges contain personal moments. As users participate and interact, they are developing a friendship, they are developing bonds, they are developing trust.

The methods for social interaction are also important to identify here. A user has the opportunity to post text, photos, images, or videos. In turn, a friend of the user has the option to Like, Comment, or Share the post. There are two aspects of this interaction to dissect here. The first is the interaction itself. It is an exchange. This exchange can be a glimpse into the private life of a user, an image or video with humorous content. It can be text that expresses a personal belief, or sharing a moment of frustration. There are many examples for what these user posts are. The importance of these posts is that the user and her friends can have specific moments to foster a connection. The friendship can strengthen by recognizing shared beliefs, humor, etc., or it can weaken by highlighting notable differences between the two users. The second aspect here is the method of exchanging the connection or disconnection. A user can choose to participate or not. There are options for reacting to a user's post does not require much conviction. The most basic, simple reaction is giving a post a Like. To Like a user's post one can agree with it, enjoy it, or find it humorous. All that is needed to execute a Like is to click on the icon shaped like a thumb pointing upwards. The exchange can be defined as being casual to a certain degree—it's just a Like. But, this casual interaction builds trust. The positive reactions to a user sharing a personal note, or a moment of self-expression foster trust.

The basic principals of participating in a Social Networking Site are the exchange of self-expression and the reaction to those expressions. The motivation for participation

here is not an exchange of information. The exchanges are personal and connect at an emotional level, to foster a sense of friendship. Most importantly Facebook wasn't created with the intention to provide a digital world that relays valid information. The significance here is that while bad information may be exchanged at rapid rates within a world such as Facebook, and while there may be sinister user profiles created with the intent to create and distribute bad information, the average user is not cognizant of it. The pursuit of information, good or bad, was not the motivation for the user to join the world.

"If experience is the ground of our certainty, then naturally it is past experience. And it isn't for example just my experience, but other people's that I get knowledge from." – L.W.

Validity has become optional for information found on the Internet, born out of the exchanges that occur within a Social Networking Site. It is optional because of the nature of the exchanges that are made. When the majority of the exchanges on a Social Networking Site are moments of self-expression, they are received as self-expression. Judith Simon (2010) explores the nature of trust and validity in relation to Wikipedia. Wikipedia is an online, free-content encyclopedia that users can edit and contribute to (Simon, 2010). She argues that there is an entanglement of trust and knowledge, and the user finds her self in a predicament of making choices to trust information, regardless of her certainty of validity. Simon wants to create tools to make information validity transparent.

> "Indeed, in the case of trust-based RSs, algorithms organize trust-relationships between users, i.e. they may induce personal trust. How then, can we be responsible knowers not only with respect to other users, but also with respect to our interaction with such algorithms?" (Simon, p. 353)

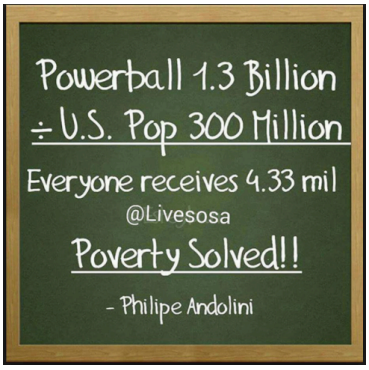
Wikipedia has content that may or may not be valid, but it is understood and accepted as a website to visit to get information about a topic. Perhaps there are tools that can fact-check topics that are shared on Wikipedia, or perhaps there is a need to develop tools that can fact check, but what about Facebook? Facebook is a place that is understood as a website to visit in order to exchange moments of self-expression. How are two users able to discern the validity of a post that is intended to be self-expression?

A Facebook user has made the decision to share a personal thought because she feels safe–there is an established sense of trust. The reaction impact is light; it is casual. A fellow user can casually Like what she has Shared. There is no requirement to defend what was Shared or to explain what the sense of connection or finding a reflection of the self within the post is. Giving a reaction to a user's post at all, on one level, is stating: I feel a connection to what was shared, and I want to acknowledge that I have felt this.

If a user's post comes into my news feed, and I read it and find a connection to it, and I see that others have expressed a connection, do I not feel less singular? Am I not finding reflections of parts of myself in other users in this moment? If I have read a post that I connect with, and I see that others connect with it as well, have I not found a communal exchange, a bonding moment in time? Is this not a community where I find a sense of belonging, even if it lasts for only a few moments until the news feed refreshes itself and new content is presented to me? Finding this sense of community, and this

sense of raising volume on one's beliefs is empowering. It justifies the moment to Like, Comment, or Share. It is an expressive moment to have confidence to say: I feel a connection to what was shared, and I want to acknowledge that I have this.

In order to discern why validity becomes optional let us revisit the lottery meme.



There are two ways to read this meme. The first is to see it as a math equation. Divide the two numbers to get the answer. If I actually divide the two numbers, I will find that the answer shown is incorrect. I can disprove the validity of this meme, disregard it, and not share it. The second way to read this meme is to consider what the message is. The message here was not simply to offer Facebook users a chance to take a stab at long division; it was a chance for expression. The message that a user can connect with here is the elimination of poverty. The message received is triggering the need for increased financial wealth—who wouldn't want one million dollars, or several million for that matter? The message must not be overlooked. Users are not sharing this meme virally because they love math; they are sharing it to express that they connect with the idea to end poverty, and to receive money for free. The users are connecting with the message and then sharing it because they believe in financial stability and want to express it. The

message offers a deeper connection to the user than math equation gently tucked within it. So, the user completely overlooks the fact that there is a computational error. The user has the choice between connecting to an implied message and recognizing an invalid math equation. When she chooses the message over information validity she has perpetuated the ability to allow validity, to be optional.

"Where two principles really do meet which cannot be reconciled with one another, then each man declares the other a fool and heretic." –L.W.

So far, I have covered what bad information is, how knowledge is acquired, how trust is formed, and how information is shared in Social Networking Sites. I have explored what bad information is and why it can be shared, regardless of the validity of the message or content. The last hurdle to discuss is information ethics. What is the role of an ethic for information shared within a Social Networking Site? If genuine users are operating innocently through information consumption, learned through language development as child, why should we explore an ethic? Bernd Frohman reviews the need for information ethics, because there exists the user who creates content with malicious intent. Frohman explores a history of self-centered information ethics based on a comparison of Foucault and Hauptman. He does this first to acknowledge that a user plays a role in the exchange of information and ought to display some sense of ethical consideration during an exchange. He does highlight those who avoid ethical information exchange: those who are morally weak, those who intentionally seek to be immoral, and those who are hypocrites. He explores these layers of unethical people to show that there

is a potential for moral action, moral information exchange, but it does imply a consciousness.

> "The problems encountered in the communication model of self-centered information ethics are organized by the connections between information, knowledge, rationality, consciousness, and the ethical idea of the dependence of free moral action on the right to know, and in the ideal situation, on the right to be conscious of any and all truths bearing upon the possibility of rational, moral decision making." (Frohman, p. 270)

When an exchange occurs between two rational individuals, the conditions for moral subjectivity can be met. Of course, each individual must choose to be conscious, aware, and make the choice to morally engage.

Frohman moves on beyond the exchange of two individuals and considers something new for information ethics. What if the content that is created and shared is not from a rational human being? What if it is a robot? Whose responsibility is it to apply ethics and maintain moral integrity? Should technology be further developed to find these malicious, robotic content creators? Frohman suggests yes, and it is because there is a concern on the effects on actual humans. "We need an information ethics that acknowledges how information processes and technologies are implicated in making up people." (Frohman, p. 273) Through reading Frohman it seems as though there can be victims of bad information, and that it is important to acknowledge this fact to develop an information ethic. While I tend to agree that an information ethic is needed, it is difficult not to acknowledge how users are interacting with information in Social Networking Sites. If the exchange of content is an exchange of information, but it is nuanced with the

emotionality that drives the development of trust, as well as the emotional connection to a message, where is there time for rationality?

"We are satisfied that the earth is round." –L.W.

The development of language in childhood builds a pre-disposition for trust. If an individual can find a sense of trust in another, she can be open to accepting a variety of information without questioning validity. Knowledge is in the eye of the beholder. It is not a database of factual information–it is a system of values. An individual creates her system of values, or her image of the world, as she knows it through experience. When an individual joins a Social Networking Site, she has the opportunity to express herself through a variety of ways to create content. The relationships formed here are based on reactions to each user's self-expressions. Bonds are created, and trust is developed. These expressions are small in frame, short in length, all constrained by the limitations of the content publishing framework, so the exchanges are quick, surface level, and rely on emotional reactions.

Memes are a type of content that users can share in Social Networking Sites. They are small in size, but mighty in the volume of their message. They are capable of being valid or invalid, but the key to propagation here is the message. It must create an emotional connection, challenge the user's views, or directly relate to an experience the user personally has had. The message is read louder than the validity of a meme because of the habits of social sharing. Social sharing is emotive, and thus validity is optional. There is a strong need for the protection of information validity and for that creation of

information ethics that many information scientists acknowledge, but I question the approach. If we are inherently flawed in the way that we develop knowledge, and that knowledge is not a guarantee of certainty, then how can we create fact-checking tools for social information exchange? I think it is important to consider the mitigating circumstances that lead to the point in time where a user makes the choice between message connection and information validity. If humans are not systematically taught to critically think and explore information validity because they are trained to trust and accept information through the process of developing language, then developing a digital information ethic will be difficult.

REFERENCES

Black, J. (2007). The Effect of Memes, Truthiness and Wikiality on Public Knowledge. *Conference Papers -- National Communication Association*, 1.

Boulding, K. E. 1. (1956). *The image: Knowledge in life and society*. Ann Arbor: University of Michigan Press.

Ershler, J., & Stabile, C. (2015). The Learning Virus: An Affective, Constructivist Movement Shaped by Ultrasociality in the Age of Social Media. New Directions For Teaching And Learning, (144), 5-21.

Froehlich, T. (2004). A brief history of information ethics. Bid : *Textos Universitaris De Biblioteconomia I Documentació*, (13). Retrieved December 16, 2016, from http://bid.ub.edu/13froel2.htm.

Frohmann, B. (n.d). Subjectivity and information ethics. Journal Of The American Society For Information Science And Technology, 59(2), 267-277.

Khoo, C. G. (2014). Issues in Information Behaviour on Social Media. *LIBRES: Library & Information Science Research Electronic Journal, 24*(2), 75-96.

Kimmerle, J., Moskaliuk, J., Oeberst, A., & Cress, U. (2015). Learning and Collective Knowledge Construction With Social Media: A Process-Oriented Perspective. *Educational Psychologist, 50*(2), 120-137. doi:10.1080/00461520.2015.1036273

Matthews, P., & Stephens, R. (2010). Sociable knowledge sharing online: Philosophy, patterns and intervention. *Aslib Proceedings, 62*(6), 539-553. doi:10.1108/00012531011089667

Mital, M.)., Agarwal, S.)., & Israel, D.). (2010). Information exchange and information disclosure in social networking web sites: Mediating role of trust. *Learning Organization, 17*(6), 479-490. doi:10.1108/09696471011082349

PAPADOPOULOS, S., BONTCHEVA, K., JAHO, E., LUPU, M., & CASTILLO, C. (2016). Overview of the Special Issue on Trust and Veracity of Information in Social Media. *ACM Transactions On Information Systems, 34*(3), 14-14:5. doi:10.1145/2870630

Robinson, E., Butterfill, S., & Nurmsoo, E. (2011). Gaining knowledge via other minds: Children's flexible trust in others as sources of information. *British Journal Of Developmental Psychology*, 29(4), 961-980. doi:10.1111/j.2044-835X.2011.02036.x

Rowley, J., & Johnson, F. (n.d). Understanding trust formation in digital information sources: The case of Wikipedia. *Journal Of Information Science, 39*(4), 494-508.

Simon, J. (2010). The Entanglement of Trust and Knowledge on the Web. *Ethics And Information Technology, 12*(4), 343-355.

Wittgenstein, L., Anscombe, G. E. M., & Wright, G. H. v. 1. (1972). *On Certainty* (1st Harper torchbook ed.). New York: Harper & Row.