Evidence of New Literacies in Seniors' Health-Related Literacy Practice

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Cultural assumptions about senior citizens' abilities to use technology often are pessimistic and disparaging: we either assume seniors cannot use technology or are surprised when they can. For instance, in a 2014 article in the popular online magazine Mentalfloss.com, the author describes a video that captures seniors' first-time uses of the then-new technology, Google Glass. Patronizingly titled, "Adorable Elderly People Test Out Google Glass," the author alternately pokes fun at the older users' reactions ("the results are hilarious") and expresses surprise at their facility ("some of them actually know it's Google Glass!") (McCarthy). This blatant fun-making of seniors' efforts to use technology is acceptable discourse in our culture, and this discourse can affect how seniors are viewed and treated. Studies on age and technological literacy practices are beginning to deconstruct these stereotypes and complicate our understanding of seniors' uses of technology. In this article, I continue that deconstruction by presenting data that shows seniors' complex, nuanced uses of new media as they acquire health literacy.

In this study, senior participants were asked to talk about the literacy practices they use to explore health concerns or other bodily issues. The literacy practices were defined only as "reading and writing" activities that somehow relate to their bodies. What's striking is that in the course of discussing their literacy practices, seniors described using a variety of media to obtain health literacy, including listening to iTunes, attending seminars, and searching Google. Seniors' descriptions of these activities reveal what Knobel and Lankshear call a "new literacies mindset" (Knobel & Lankshear, 2007; Lankshear & Knobel, 2011), meaning that they are enculturated into the new media landscape. This finding characterizes seniors' uses of technology as more complicated than is typically depicted in our culture and prompts additional research questions

regarding the development of technological literacy programs for seniors and the depiction of seniors and technology in popular culture.

Seniors' Complex Relationship with New Media

Much of the research in rhetoric and composition about seniors' literacy practices has focused on their practices with technological literacy. For example, McKee and Blair (2006) provide technological literacy programs for seniors, recounting national statistics that show how older adults are less likely to use computers. They write, "older adults who do not use the Internet are at an increasing disadvantage in terms of developing social relations, participating in civic discussions, and gaining valuable knowledge on issues such as health care" (p. 14). McKee and Blair note that a lack of technological literacy is partly to blame for this shortfall in the senior population. Their experiences working with senior technological literacy programs show that there are a number of "barriers" to seniors acquiring technological literacy including health and physical limitations, financial restrictions, and internalized ageism that results in a lack of confidence. McKee and Blair provide some suggestions for developing programs that help to break down these barriers and to capitalize on the benefits that they have seen flourish in their programs.

The internalized ageism that is a barrier to technological literacy (McKee & Blair, 2006) has been found to be prevalent in media marketed directly to seniors (Bowen, 2012). Lauren Marshall Bowen systematically analyzed AARP publications and social media posts to examine the ways they represent seniors' uses of technological literacy. She found that the publications "promoted discourses of fear, reinforcing the widespread idea that old people are, or else should be, afraid of new technologies" (p. 450). She provides examples of AARP articles that show the

dangers of technology and that perpetuate the idea that seniors' mental abilities are weakened with age and that seniors are vulnerable to online scams.

This study shows that when seniors talk about reading, they talk not only about decoding text on paper and screen, but they also include in their discussion of reading a variety of media that does not include the decoding of text. In other words, when asked, "Do you read about health, exercise, or the body?", participants often mention specific print linguistic texts that they read, but sometimes they include non-print linguistic texts in their discussions. This response happens throughout a number of interviews and therefore became a category that was further explored within grounded theory analysis. A close analysis of some of the conversations about these other-than-print "readings" reveals that seniors' literacy practices are heavily influenced by new media and show a sophisticated facility with digital technologies that so often is presumed to be outside of seniors' capabilities.

Theories on new media show that compositionsts' interest in digital technologies is undergirded by the fundamental question of how digital technology affects the ways we think about and value texts and literacy practices. At issue are not the flashy images or tools that we can add to texts, but the questions about what changes in humans' engagement with texts when digital technology is introduced. Thus, inquiries into new media are not questions about digital texts, but questions about how writers and readers engage with texts – all texts – in ways that are influenced by our contemporary digital environment.

Ann Frances Wysocki (2004) defines "new media" by the ways writers think about their text construction. Writers create new media texts when they are aware of the "materialities of texts" and to exert agency over materials – the stuff of which texts are made, as well as the

structures in which texts function – to change how texts get constructed and what that construction communicates. She writes,

> we should call 'new media texts' those that have been made by composers who are aware of the range of materialities of texts and who then highlight the materiality: such composers design texts that help readers/consumers/viewers stay alert to how any text – like its composers and readers – doesn't function independently of how it is made and in what contexts. Such composers design texts that make as overtly visible as possible the values they embody. (p. 15)

Wysocki goes on to say that "new media texts do not have to be digital," but that new media texts are ones whose materialities are made apparent and "contribute to how [the text], like its producers and consumers, is read and understood" (p. 15). New media texts are ones that provide evidence that the author considered the materiality important to the message, and that the reader should be aware of this, too. Wysocki writes that we can think in new ways about materialities in part because of the advent of new technologies that allow for texts to be constructed on screen and on paper in a variety of ways.

Similarly, Bolter & Grusin (2000) emphasize that "new media" is not simply adding a digital component to existing media, but it is a transformation of the way in which the media is used:

> The World Wide Web is not merely a software protocol and text and data files. It is also the sum of the uses to which this protocol is now being put: for marketing and advertising, scholarship, personal expression, and so on. These uses are as much a part of the technology as the software itself. (p. 16)

New media, Bolter and Grusin write, encapsulates more than digital components of a technology. It also includes how writing and reading are done differently within the context of what we have constructed new technologies to do.

Knobel & Lankshear (2007; 2011) use the term "new literacies" to describe texts that are produced with a new mindset that has been facilitated by technological change. They write that new literacies are marked by a "new mindset," or "new ethos stuff." They argue that new literacies are practices that promote a mindset that is open, fluid, participatory, and egalitarian, and that has been facilitated by technological change. A literacy practice is new if it promotes a new way of thinking about texts as fluid, shared, and able to be remixed. On the other hand, the old mindset is determined by an allegiance to print, authorship, and strict boundaries that define what is and is not text.

Knobel and Lankshear's new literacies mindset that they term "new 'ethos stuff'" (p. 7) includes anything that prompts a new way of thinking about the literacy practice that one is using:

> New literacies are more 'participatory,' 'collaborative,' and 'distributed' in nature than conventional literacies. That is, they are less 'published,' 'individuated,' and 'author-centric' than conventional literacies. They are also less 'expert-dominated' than conventional literacies. The rules and norms that govern them are more fluid and less abiding than those we typically associate with established literacies. (p. 9)

This "new ethos stuff" can be characterized by a new mindset that embraces the free flow of information and finds value in something that can be widely disseminated (Knobel & Lankshear,

2007). This mindset contrasts with an old mindset that sees text as scarce and thus valuable in its scarcity. They describe how the new mindset is egalitarian, where everyone is an author or collaborator, taking bits of culture and refashioning them into new texts; the old mindset is hierarchical, where the author is a central authority and the distribution of information is based on a model of ownership and unevenly distributed power relations. The new mindset is characterized by its freedom of exchange and use of information, artifacts, and texts to construct new artifacts and texts, and its focus on relationships: people engage in textual production and consumption in order to connect with others. Knobel and Lankshear (2007) call instances of literacies that share both new technology and a new mindset "paradigm cases of new literacies," while those that have only a new mindset are "peripheral cases." In the latest edition of their book, they describe both cases of new literacies as ontologically new, while only paradigm cases possess the "new technical stuff" (2011). On the other hand, literacies that simply redraw a print linguistic text in a digital form and that do not promote the new mindset are not to be considered new literacies.

Knobel & Lankshear's term "new literacies," Wysocki's definition of "new media" and Bolter & Grusin's concept of "new media" align insofar as the concepts refer to texts that have been facilitated by technological change and yet that do not necessarily require technological materials to qualify as new media. The terms relate to this study for the same reason they relate to each other: they articulate the importance of a new way of thinking about texts that is facilitated by technology.

By examining participants' talk about reading, we can see that seniors' conceptualizations of literacy are influenced by the contemporary digital landscape. Specifically, seniors' talk shows

that they oscillate between an old literacies and a new literacies mindset (Lankshear & Knobel, 2011). This also shows that seniors, traditionally thought of as having an "old" mindset, in fact may be at the forefront of engaging with new literacies alongside the "young people … who are now adolescents, [for whom] cyberspace has been integral to their experience of 'spatiality' since their early years" (Knobel and Lankshear, 2007, p. 9).

Methods

In this study, I interviewed participants who were recruited from two senior centers located in mostly white, middle-class neighborhoods in the Midwestern United States. I recruited 12 seniors ages 60 to 80 – two-thirds of whom are female – and recorded conversations with them about how they use literacy practices to manage the body. Semi-structured interviews, which averaged 57 minutes in length, were digitally recorded and transcribed, and the analysis was based on those transcriptions.

I used grounded theory to analyze the data, identifying a number of themes to categorize the ways seniors discuss reading about the body (Corbin & Strauss, 2008). Grounded theory is an analytical process where the researcher reviews the data multiple times and allows for categories that answer the research question to emerge from the data. The data is then coded based on the categories, and the categories are refined to accommodate the nuances of the data. The analytical method allows for complex categories to emerge that otherwise would not be discovered if the researcher approached the data with a preexisting lens.

This study's analysis revealed that when seniors describe reading about the body, they describe it in three ways:

- participants characterize how they use reading to make bodily changes;
- participants discuss obstacles to reading; and
- participants make statements that complexly define reading.

In the third category, two sub-categories emerged. More than half of participants made statements that complexly define reading either by (a) broadly defining literacy practices as including media outside of encoded text, or by (b) identifying a time when they read about the body or health, but then underscoring that it doesn't count as "reading." This article focuses on subcategory (a), which emerged in the interview transcripts of one-third of participants. This argument presents the most salient examples from two of the participants as a way to examine in-depth the complexity of individuals' experiences with and conceptions of literacy practices.

The study is limited in its generalizability because of the number of participants. However, close analysis of a small number of samples can provide researchers with a level of detail and nuance that a larger, generalizable corpus may not allow for. The study also is limited in that the category analyzed here appears in only one-third of participants, yet this low frequency should not deter analysis. Part of the reason for low frequency may be that the interview questions were not designed to extract this category from the data. This is the double-edged sword of grounded theory: categories emerge that were unanticipated at the time of data collection, which allows for a breadth of findings; yet because the findings were unanticipated while data was collected, instruments were not targeted to the phenomenon that ended up emerging. An additional step in grounded theory analysis calls for the application of a category to a new set of data, and a future study might examine this category further.

Results

Participants responded to questions about reading practices with descriptions of non-reading activities. The chart below describes the participants, their gender, age, reader's purpose, and the "reading" activity alternative to decoding text.

Participant	**Gender**	**Age**	**Reader's Purpose**	**Activity**
Charlotte	F	72	To learn about yoga	Speaks with yoga instructor
Ernest	M	80	To learn about health and science	Listens to reports on iTunes
Kay	F	66	To learn about weight management	Attends a seminar
			To learn about heart health	Speaks with sister Attends a seminar
Mildred	F	80	To learn about heart health	Observes the actions of a friend
			To learn about yoga	Watches a woman who does yoga on television
			To learn about general health	Watches Dr. Oz on television

In all of these instances, participants discussed reading practices by substituting for the decoding of text an alternative information-gathering activity. In each example, participants were asked about their reading practices as they relate to the body or health, and they responded with descriptions of activities that were alternative to reading.

Reading is often seen as an information-gathering activity, and this is especially true when people think about reading about health-related issues. Therefore, it does not seem unnatural for participants to focus on the types of information they gather and to deemphasize the way that they gathered it. However, by examining this phenomenon of how participants transition from speaking about reading to speaking about other ways to gather information, we can better understand the ways they conceptualize their literacy practices.

Seniors' New Literacies Mentalities

This subcategory that emerged in the data is a particular type of conceptualization of literacy practices. Each of the participants was asked about reading, and each transitioned into talking about an activity that was *not* reading. This phenomenon begs questions about the ways participants conceptualize the media through which they acquire information. What media – new technologies, or not – are used, and how are they valued by participants? A fine-grained analysis of the most salient examples reveals that participants have a firmer grounding in new media than prior research has found.

Kay, a 66-year-old volunteer at a senior center who also takes the weekly yoga class there, casts a broad net when defining what she reads about her body and includes such non-textual events as seminars and classes. Kay says she has not read much about the body throughout her life. When asked if she reads anything that relates to health or exercise, she says that she has probably done more of that type of reading in the past five or six years on a variety of issues:

> Issues related to blood pressure and heart, and basically better diet and able to keep your heart healthy. And with Kate starting this Lean-On-Me program, we

> did have –. I did go through a weight management seminar type thing where we checked our BMI and did all that with a gal who is in our yoga class. And she was in charge of it. And she works –. She's a nurse, and she works down at, I think it's the Health Group? Down in Townsville. But she did the class, and it was excellent.

When prompted to specifically talk about her reading practices related to health issues, Kay easily transitions into talking about seminars that she has attended to retrieve information about health issues. She gives no sign of pivoting the conversation to a slightly different topic, and she makes no apologies for answering the question in a different way than what might traditionally be expected. Kay begins her answer by naming the topics that she has read about: "Issues related to blood pressure and heart, and basically better diet." Then, she uses the coordinating conjunction "and" to show that she is adding a similar topic to the discussion before speaking about the Lean-On-Me program that hosts sessions and seminars about healthy activities. In addition to discussing the helpfulness of the weight management seminar, Kay goes on to describe additional seminars she attended in the 6-week program that taught her about body toxins, heart issues, and reflexology. While Kay is clearly prompted to talk about reading in this conversation, she transitions easily to talk about obtaining information in ways other than through print linguistic texts, such as through attending and participating in seminars on various health topics.

Kay's discussion of her reading about the body and health issues represents a mentality that is partially indicative of using new literacies. First, Kay decenters the book, a move that brings her away from the "old" mentality in which books dominate: "The dominance of the book

as the text paradigm, social relations of control associated with 'bookspace,' and a discernible textual 'order' are integral to the first [old] mindset" (Knobel & Lankshear, 2007, p. 13). She decenters the book by responding to the question with ideas about high blood pressure and heart health and not on texts about those ideas. She also limits the book's authority by citing a medium other than the book – a seminar – as a source of this information. Kay is not necessarily conscious of these choices, but a new literacies mentality is evident in her discussion of literacy practices.

At the same time, Kay strays away from the new literacies mentality and moves toward the "old" mindset that values expert authority. The old literacies mindset follows norms that are "defined by 'centralized' authorities and experts" and that focus on "credibility" (p. 14). In describing the seminar leader, Kay emphasizes her credibility by noting her qualifications: she is a nurse with Health Group. Furthermore, Kay underscores the nurse's centralized authority by saying that "she was in charge of it." Finally, she reiterates the value of the class based on these attributes by saying, "But she did the class, and it was excellent."

While on the one hand Kay's focus on ideas and mention of a seminar in her discussion of "reading" appeals to the new literacies mindset, her later focus on authority and credibility within the alternative medium of the seminar speaks to the old mindset. If one were to argue that the seminar should be considered a "new" literacy, it would have to be acknowledged as a *peripheral case* of a new literacy because it does not, to our knowledge, contain "new 'technical stuff'" (Knobel & Lankshear, 2007). Still, making the argument that the seminar is a new or old literacy is less important than highlighting the ways Kay's mindset about literacy practices is complexly composed of both new and old characteristics. It seems that in this example, Kay's

approach to this literacy practice falls somewhere along a continuum between the old and the new.

As Kay continues to discuss reading practices – specifically, print linguistic practices – Kay's second diversion from the print linguistic holds additional clues to her new literacies mentality:

> Researcher: You said you've also read about blood pressure. Anything in particular? Any book or anything?
>
> Kay: Just mostly things that I've read on the Internet, probably. No, I can't think of a book specifically. Just knowing that if keep your heart healthy, your blood pressure's going to be better. Watching what you eat so you don't eat bad things, then you're going to put more weight on. I don't read nearly as much as my sister does. She's constantly telling me about things. I'm trying to think. Just mostly trying to eat heart healthy foods and checking my blood pressure. I do take medicine, and we're very fortunate here that we have someone come in a couple times a month – there's usually somebody here every week – to take blood pressure readings. So that helps.

The first interesting transition in the example above happens when Kay begins to talk about reading online materials about health and then transitions into talking about what she knows about health. In response to the researcher's prompting to discuss reading, Kay says, "Just mostly things that I've read on the Internet, probably. No, I can't think of a book specifically." Kay's use of "no" provides an answer to the researcher's specific question, and her pivot to a

new topic is almost unnoticeable. She pauses for three seconds before stating not a text that she has read, but a piece of knowledge she has gained from a text – whether that was in the form of a print linguistic resource, an online source, or even a seminar or class. Kay easily transitions from talking about reading as decoding to talking about her knowledge of the subjects about which one might read; this shows that the focus is not on the text, but on the knowledge she has gained from it. As with the example above, this suggests an attitude that limits the authority of texts, authors, and experts, which is an attitude conducive to using new literacies.

This example also reveals a spirit of collaboration that is part of the new literacies attitude. Kay's focus on the information gleaned from resources coupled with her discussion of her sister who is "constantly telling [her] about things" privileges the importance not only of information but also reveals the relevance of getting information from co-participants in literacy practices (e.g., Internet reading). Knobel and Lankshear (2007) have cited Schrage in arguing that new literacies are more about the development of relationships in the act of engaging in literacy practices, and less about the transmission of information. To that end, new literacy practices have changed the ways social relations and texts interact in our culture: "Conventional social relations associated with roles of author/authority and expert have broken down radically under the move from 'publishing' to participation, from centralized authority to mass collaboration" (p. 14). While we cannot know from this data the extent of the relationship building that happens between Kay and her sister through these literacy practices, what is evident is that the literacy practices happen in relationship with her sister, with the focus less on the authority of the text and more on the exchange of information among users.

In answering the question about what he reads, Ernest, another participant, also shows that he falls somewhere along the continuum between the old mentality and the new literacies mentality. On the one hand, Ernest, age 80, shows he possesses the new literacies mentality by citing media alternative to print linguistic texts in response to a question about reading. On the other hand, his acknowledgment of expert authority reveals some traces of the old mentality:

> Researcher: Do you ever read about physical, body, health, exercise, anything like that?
>
> Ernest: Yeah. Yeah. But I do it on a piece basis. I have some –. I use iTunes for a lot of my stuff. And there are things available on iTunes that relate to National Institutes of Health, relate to some science observations. And in the articles that I get from sources like that, I find a lot of that information. So, I listen to it. The iTunes, I listen to it. And I get a lot of information, and if it seems that I need to learn more about it, then I can Google it in and get all kinds of stuff on it. That's one of the things I really like about the computer. I can take any concept, put it in Google, and I can get something that relates to that. Now, of course, you have to learn how to use it so that you don't grab the first few, 'cos those are ads.

Before providing specific details about what he reads in response to this question, Ernest pauses for four seconds, and then mentions that he uses iTunes, a place for purchasing and storing digital audio recordings, especially music. Ernest's response to a question about reading with a medium that does not include decoding text reveals that he may have a new literacies mentality that lessens the authority of books. Yet Ernest does connect iTunes back to something he can

actually "read" when he notes that, through Google, he can find additional information on a topic that was described in an audio file that he had listened to. That Ernest begins his discussion with iTunes and later talks about related Google searches shows a more fluid conception of information gathering and thus a new literacies mentality. This mentality is one that is opposed to "the dominance of the book as the text paradigm, social relations of control associated with 'bookspace,' and a discernible textual 'order'" (Knobel & Lankshear, 2007, p. 13). At the same time, Ernest's citation of an expert authority, the National Institutes of Health, might reveal an adherence to the old mentality that privileges "authorities and experts" (p. 14).

Still, Ernest's comments about Google reveal he moves toward a new literacies attitude more than the old mentality. Two components of his discussion of Google above connect to two characteristics of the "new" mentality. First, unlike the old mindset where scarcity of goods creates value, the new mindset values availability of information: "In the economy of cyberspace, however, the opposite holds. Barlow argues that with information it is familiarity, not scarcity that has value" (p. 11). Ernest appreciates Google because of its ability to bring him a lot of information on a given topic: "if it seems that I need to learn more about it, then I can Google it in and get all kinds of stuff on it." Ernest values the amount of information and the ease with which he can access it, thus revealing a new literacies mentality. Second, Ernest reveals a new literacies mindset in this part of the conversation when he comments on the value of internetworked sources. Knobel and Lankshear describe the importance of relationship of information:

> Applying certain kinds of copyright and permissions restrictions to the use of information may constrain the dispersal of that information in ways that

> undermine its capacity to provide a basis for relationship. This will, in turn, undermine the potential of that information to work as a catalyst for generating creative and productive conversations, the development of fruitful ideas, the emergence of effective networks, and so on (cf., Lessig 2004). (p. 11-12)

Knobel and Lankshear (2007) note that "information" should have the ability "to provide a basis for relationship" and "work as a catalyst for generating … the emergence of effective networks." This is precisely what Ernest claims to value when he describes Google: "That's one of the things I really like about the computer. I can take any concept, put it in Google, and I can get something that relates to that." Ernest indexes the significance of information by emphasizing that his starting point is a "concept," and he shows that he values the interconnectivity of information by stating that he "likes" that he can "get something that relates to that." This focus on concepts and their relationships with other concepts provides strong evidence that Ernest holds a new literacies mindset.

Ernest continues to talk about his use of Google in a way that sheds additional light on his new literacies mentality. The example does not qualify as something that fits into this grounded theory category because the core of his activity – conducting a Google search – is in the decoding of text, yet his discussion is a continuation of his description of his uses of Google and provides insight into his new literacies practices. Ernest then describes how he uses Google to help facilitate the free exchange of information and the collaboration that are indicative of a new literacies mentality. He notes that Kelly, the yoga instructor, was looking for affordable yoga blocks to purchase and keep at the center:

> She wanted to get some more blocks, but she wanted to get them at a decent price. So over the holidays, I looked at the –. I put "yoga block" in Google, and came up with about several sources of blocks, which is not unusual. So I picked up and checked some of them out. And some of them I recognized, I looked at some of the site before I knew yoga accessories would be a standard business, and there's several things that I recognized. And they were like eight dollars or more per block. Well I happened to scan down, I noticed that there was a listing there that said Wal-Mart and the address. Not in the description, but the address. So I priced that, and I came up to a site, Wal-Mart, they had a package of two blocks and a strap as a package on sale for less than eight dollars. So I sent the message to Kelly, I said, "Hey, take a look at this." She did, and she bought ten packages.

Ernest reveals a new literacies mindset in talking about collaborating with Kelly on a problem. Knobel and Lankshear (2007) state that "new literacies are more … 'collaborative'" (p. 9) and encourage the "free" exchange of information (p. 12). Ernest narrates his interactions with Kelly that take place on a number of spatial levels. He speaks with her in person about a problem, and then he uses Google to search for solutions to that problem. Finally, he communicates with her by sending her a message (presumably an e-mail), and she takes up that information and uses it to solve her problem. This complex network of in-person and online exchanges of information is an example of the "fluid" nature of interacting with new literacies.

In discussions of examples from both Kay and Ernest, I argue that while they possess a new literacies attitude in some ways, they retain the "old" mindset in other ways. In many instances they seem to reduce the authority of text and embrace other media, yet they still show

evidence of bowing to authorial credibility by deferring to those with medical credentials, such as nurses and experts from the National Institutes of Health, even if those authors are not communicating through writing. Knobel and Lankshear (2007) hasten to note that their description of new and old mindsets is not meant to create a dichotomy that divides literacies into one or the other category and that there are other ways of conceptualizing literacies. Still, their descriptions of the "new" and "old" provide a relevant heuristic for prioritizing what is important when considering what counts as a new literacy. While a continuum polarizes the "new" and the "old," a continuum also allows for a number of additional plotted points that reveal the gray area that exists between the two mindsets. The data in this study reveal that some seniors may possess a mindset that is in the process of evolving from old to new.

Conclusions

As seniors, participants show that a new literacies mindset is not limited to the young who are presumed to be more familiar with new technologies. Traditional characterizations of seniors show that they do not have technological literacy and should not have technological literacy (Bowen, 2012), and that they internalize those characterizations to the detriment of their literacy skills (McKee & Blair, 2006). Yet in the examples in this study, seniors show the emergence of a new literacies mentality that reveals that perhaps seniors are not so isolated from the modern world's evolving technologies, or at least the mentalities that come with them.

Importantly, this study does not collect data to specifically examine seniors' uses of technology to manage the body, but instead finds that when some seniors talk about reading, they show evidence of having, at times, a new literacies mentality. Within that conceptualization, seniors show that they fall along a continuum between the old and the new literacies mindsets.

Where they align with a new literacies mentality, they at times use new technologies, which counts as paradigm cases of new literacies; where they don't use new technologies but retain the new literacies mentality, their activities are considered peripheral cases of new literacies (Knobel & Lankshear, 2007). Insofar as the new literacies mentality is evidenced in this data, seniors seem to buck expectations of lacking technological literacy.

The irony here is that it is not the aging body but it is likely society's rhetorical representation of the aging body that prompts seniors to conduct more research on the body; and that research allows them to refine their new media skills. Cultural representations of age have been widely characterized as negative (Faircloth, 2003), and the ailments often associated with age come into being when discursively constructed within society (Rembis, 2008). The body only is old because it is contrasted against the norm of youth, just as the body is only disabled because it is contrasted against the norm of what "most people" can do. Furthermore, as we age, our bodies do change, and that physical change in addition to rhetorical representations of it may prompt seniors to adapt to new impairments. When a body becomes "abnormal" with age, societal pressure and altered materiality prompts the aging to stay young through exercise, diet, products, and so forth. Thus, seniors are prompted to do more research, to look up more of what they perceive to be ailments on WebMD, and read up on more skin-care products than those who fall into the "norm" of youth. This provides this group people deemed least competent in the use of technology the opportunity to become the most competent. That which allows seniors to acquire a new literacies mentality is, in part, the rhetorically constructed ageism that told them they couldn't do technology in the first place.

Expectations of seniors' abilities to use technology within our culture are traditionally low. This study complicates this picture by revealing how seniors' talk about researching their bodies shows them to be somewhat familiar with technological literacy practices. This may lay some groundwork for new questions to be asked: How might this apparent acculturation into new media provide an informed basis on which to develop senior technological literacy programs? How might seniors' voices help to redraw the public conception of their technological literacy? How can a focus on these voices help seniors to redefine their own identities, as Ray (2000) has discovered through focusing on seniors' writing? Future research might begin with open-ended interviews on seniors' technological literacy practices to inform the construction of technological literacy programs, to help seniors define their needs and goals in engaging with these programs, and to characterize representations of seniors and technology in our culture.

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