

MEDIA INFLUENCE ON BIOBANK DELIBERATIONS

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In 2007, the authors participated in running a deliberative public engagement event that sought to narrow deficits of democracy related to the governance of biobanks. The participants of the event were asked to continue viewing popular media reports (i.e., television, newspaper, radio) of the deliberation topic before the event and were encouraged to research and discuss the controversial concept of biobanking with friends and family. This paper tracks and analyzes if and how such media, in this case, primarily news media, influenced participant deliberations. It showcases how media references were used (1) as a source of new discussion topics; (2) to rally and reinforce discussions; and (3) as a source of comfort for deliberants. These results help clarify the range of influences that media can have on participants during a public engagement event, which the authors argue can help improve the future design of such events and thereby support rich citizen participation in health policy debates.

Keywords: democracy, mass media effects, conversation analysis, biobanks, public engagement

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Over the past several decades a growing trend has sought to develop new models of public engagement that encourage citizens to actively participate in ongoing science and health debates and policy discussions (Rowe & Frewer, 2005; Einsiedel, 2008). This trend has created a vast body of research, with for example, Rowe & Frewer (2005) cataloguing over 100 different engagement mechanisms. Within this field there has been an interest in the role of the media but often as one type of engagement mechanism that is traditionally used to disseminate information. Much less focus has been paid to media influences on how citizens functionally participate while part of a public engagement event.

This paper aims to track and analyze how media, in this case, primarily news media, influenced participants during a deliberative public engagement event (described further below). Such deliberative events seek strong, active participation of citizens in policy discussions so as to address democratic deficits (e.g., unequal access to shape public policy decisions). They are in contrast to predominant methods where citizens often only participate by voting or joining stakeholder groups that vie for political influence. With this latter method, decisions and policies are made by elected officials often with the support of “neutral” unelected experts (Jasanoff, 1990). However, arguments for turning to deliberative public engagements have come from the recognition that the values and beliefs of officials and experts do not necessarily match those of the public, leading to problematic issues of representation, trust, and legitimacy in government policies, as well as difficulties in broaching controversies such as the management of risks (Burgess & Tansey, 2009).

In 2007, the authors participated in running a deliberative public engagement event related to the governance of biobanks (collections of human tissues and blood that can be used for research). Our team was particularly interested in informed and deliberative input from a range of perspectives within the citizenry on the values that should guide biobanking and how different publics would rank them. We consider this important because, while some proponents argue that biobank research will help untangle the links between disease, genetics, and public health, others are convinced that biobanks may foster risks of genetic discrimination, breaches of privacy, and troubling relationships concerning intellectual property (Corrigan, 2006; Secko, Preto, Niemeyer & Burgess, 2009).

The event was called the ‘BC Biobank Deliberation’ and involved a random-digit dialed demographically stratified sample of twenty-one British Columbians (BC). It was conducted over two weekends with an intervening weekend. Participants received an information booklet before attending, heard from five expert speakers, and spent much of their time split between facilitated large and small group discussions (Burgess, O’Doherty, & Secko, 2008; Longstaff & Burgess, 2009).

The BC Biobank Deliberation drew theoretical and practical guidance from the field of deliberative democracy, whose proponents call for a shift in political decision making from mere votes to “communicative processes of opinion and will-formation” (Chambers, 2003). This ideal requires the creation of processes where free and equal citizens *deliberate* together on important public issues. In such a deliberative setting, citizens are asked to reflect on an issue, give reasons for their position, work to understand the perspectives of others and be willing to change their initial preferences. It is hoped that fostering discourse that explicitly emphasizes reasons for participants’ positions can correct for the status quo of typical political symbology, where powerful symbols are employed to influence the behaviour of citizens (Dryzek, 1990; Bohman, 1998; Gutmann & Thompson, 1996).

However, a deliberative event does not divorce participants from their political views and the influence of symbols; political views that are influenced by the mass media, which has long been seen as crucial to democracy and still dominates much of the production and distribution of information. Extensive research has focussed on exploring how the media influence public attitudes (e.g. Gavin & Sanders, 2003; Gastil, 2008). However to our knowledge, little is known about how these influences play out, specifically, in a deliberative setting. With deliberative events continuing to grow in popularity (e.g. Canadian Public Health Association, 2001; BC Citizens Assembly on Electoral Reform, 2004), this is an important area in need of investigation.

This paper begins by considering the influence of the media on framing public perceptions (of topics such as biobanking) and the connection between media influence and deliberative democracy. We then discuss the results of our tracking media reports before the 2007 event, followed by quantitative and qualitative analyses of how the media influenced participant discussions. The analysis indicates that the quantitative database of media reports was useful in predicting what topics would emerge during discussions and the general state of optimism for participants, but could not predict how participants used various media sources in their discussions. We conclude by discussing the implication of these findings for public engagement events.

BACKGROUND

Media Influence: Framing Public Perceptions

The media are a major source of scientific information for non-specialists (Best & Kellner, 2001; Nelkin, 1995; Rogers, 1999), which individuals often find helpful to draw on while making complex decisions across a range of topics (i.e., medical, safety, food

purchasing decisions) (Croyle & Lerman, 1999). The media also have a strong influence on risk perceptions (Kasperson et al, 1987). As such, the media, in addition to cultural values, worldviews, shared ethical principles, and the outrage dimensions of risk can be used as an input for decision making at both the community level (will this proposed industrial plant negatively impact the health of our community?) and personal level (should I follow a low carbohydrate diet?) (Nelkin, 1995).

Research conducted in this area since the 1960's has showcased the power of media to frame or influence citizens' understanding of political and social issues (Rogers & Dearing, 1988; Iyengar, 1991). Within these effects, it is well recognized that while the media may not shape public perceptions on every issue, they do shape the public agenda (what people are talking about and/or how they are discussing it). Such agenda setting can occur through the media directing attention to particular issues or political personalities, as well as becoming the target of public relations efforts (McNair, 2000). Two levels of agenda setting have been distinguished. In the first, public attention is drawn to a topic when the media begin to cover it. This may or may not then lead to the second level, where media coverage begins to influence public attitudes (Weaver, McCombs, & Shaw, 2004).

The second level of agenda setting can be thought of as synonymous with framing effects of the media as related to public discourse. In its simplest form, this relates to how media content "frames" how citizens discuss issues (Scheufele, 1999). Iyengar and Kinder's (1987) experiments with the framing of news demonstrate that even small amounts of media coverage can produce "significant shifts in viewers' beliefs" (Iyengar & Simon, 1993). Boholm's (1998) use of symbolic anthropology and semiotics to study visual media representations of the Chernobyl disaster provides another example. He states that these "forceful symbolical messages" are key components in understanding how "risk messages are socially and culturally construed" (Boholm, 1998). Such studies suggest that our cognitive, cultural and ideological processes can be shaped by the media, where for example, the continuous repetition of a particularly framed news story causes one to adopt this frame when discussing the topic with others (Gastil, 2008).

Challenges Facing Health Media Coverage

For a Canadian public engagement event, the potential for the media to frame public perceptions is significant when viewed against the 2003 General Social Survey (GSS) on social engagement that confirms almost 9 out of 10 Canadians (89%) follow popular media reports either daily or weekly, with print journalism cited as a popular source of information for 70% of frequent users (Keown, 2007). It was this connection that became the original

inspiration for this research paper, as well as the recognition of the history of debate over if/how media coverage distorts health and scientific debates (Bubela et al., 2009).

While these debates are too varied to comprehensively review here, it is useful to briefly address their range to illustrate how media coverage of risk topics (such as biobanks) could be problematic. For example, while some studies of newspapers have shown health coverage to be accurate (Bubela & Caulfield, 2004; Holtzman et al., 2005) and scientists to be generally satisfied with such coverage (Peters et al., 2008), others have closely scrutinized and questioned the accuracy of medical reporting (Cassels et al., 2003; Moynihan et al., 2000; Schwartz 2004; Schwitzer, 2003; Singer, 1990). Singer (1990) has noted that while most media stories do not include false statements, they can include omissions or changes in emphasis, as well as overstate the generalizability of results and overrepresent extreme positions. Overrepresentation of small risks occurs when risk problems are discussed in the typical dichotomous journalistic format (Morgan & Lave, 1990).

Those who track the influence of the media should also be aware of the impact that the media can have on an individual's or group's decision making processes. Risks can become amplified through what is commonly referred to as the "ripple effect". Ripple effects occur when risks are inappropriately applied to outwardly "similar" hazards. This often occurs when risks of consuming rapeseed (a non edible industrial lubricant) are transposed to canola products. Risk amplification can also lead to misperceptions in the frequency of an event. As a result, citizens fear less likely risks and fail to prepare for more common ones. An event, especially if it is rare or dramatic, can act as a risk signal that triggers other public responses such as demands for additional regulations or research. These signals are amplified or reduced when they are processed or contextualized by individuals and social amplification stations like the media or activist groups (Kasperson et al, 1987).

The Influence of the Media and Deliberative Democracy

It was long held that audiences were unsophisticated and largely passive recipients of media messages (Seale, 2003). But in the last three decades an 'audience theory' has emerged that sees audiences as selectively accepting messages consistent with their values (Nelkin, 1995), and thereby not just consuming media but interacting with them (Rowe & Frewer, 2004). Indeed, from a deliberative democracy perspective, the media are often viewed as an intrinsic, perhaps inescapable, part of the world that has long been associated with the functioning of politics and the ability of citizens to self-govern (McNair, 2000). This democratic role of the media, which is most often discussed with reference to journalism, is linked to the hope that adequate and equal information will better enable people to exercise citizenship and participate in the governance of society.

Extensive criticism has been laid against the media for their inability to perform their democratic function. Parkinson (2005) usefully characterizes criticism of the media into two general types: “input” complaints and “structural” complaints. Input complaints refer to the information that is being interjected into media production, which for example, may come from a limited set of viewpoints or be put forward by powerful interests. In contrast, structural complaints refer to the media themselves and their choices, training, and organizational features, which may be framing information in particular ways as it is produced. For those interested in deliberative democracy and public engagement, the concern with both input and structural complaints of the media are that they may unduly undermine or bias the ‘communicatively rational’ discourse that is sought. These criticisms also overlap with the specific challenges discussed above for health media.

Despite such criticism, many scholars have suggested that the media and public life are closely linked. Habermas (1991) defines the public sphere, the social domain where public opinion is formed, as in part needing “certain means of dissemination and influence” that is carried out by newspapers, periodicals, radio and television (Habermas, 1991). Dewey has also written about society as being linked together by such communication (Dewey, 1928). This seems to suggest that media use comes before, or at least during, opinion formation. For Bryce (1888/1973), the linkage between the media and public life moves a citizen through four stages: from reading a newspaper, to having a political conversation, to forming an opinion, to actively participating in political activities (Bryce, 1973). More empirically, Koch (1994) has found in an experimental group asked to read *The New York Times* daily, that newspaper reading is associated with the level of comfort people have in expressing political opinions. Extending this with a survey of 1,029 U.S. adults, Kim, Wyatt, and Katz (1999) argue that people with higher media use are more inclined to argue with those that have different opinions.

None of the above guarantees that media use will affect political activity, but does strongly point to the media as one trigger of political conversation. Regardless, what does seem to be well accepted is that the media have the power to establish a ‘framework of expectation’ that gives meaning to an issue and can therefore play a powerful role in policy decisions.

METHODS: ANTICIPATING THE INFLUENCE OF MEDIA ON DELIBERANTS

The participants of the 2007 event were asked to continue viewing popular media reports (i.e., television, newspaper, radio) of the deliberation topic before the event and were

encouraged to research and discuss the controversial concept of biobanking with friends and family. To anticipate the impact that the media have on participants, team members kept track of media reports on biobanks and relevant events for approximately five months before the event. In addition, systematic broad key word searches (genetic, health) were performed on the ProQuest “Canadian newsstand” and “CBCA current events” databases, which includes small papers such as the Trail Times and large distributors such as the Vancouver Sun, the biggest newspaper in BC.

These searches were performed to identify and analyse if/how major themes from various news reports may be influencing participants’ views or conversations during deliberations. Recall that according to the GSS, print journalism was cited as a source of information for 70% of frequent media users (Keown, 2007). After the news articles were compiled and reviewed, they were coded as focussing primarily on hopes or concerns. In other words, articles characterized as hopeful focussed primary on good outcomes and potential benefits while the latter focussed on harmful outcomes and possible risks. Common themes were also tracked, which were compared against major themes that emerged from event transcripts.

After the event, transcripts of the small and large group deliberations underwent both quantitative and qualitative analysis for media references, influence, and uptake. The purpose of the transcript analysis was to code for aspects of small and large group deliberations that may be influenced by media reports. Transcript analysis was approached in two ways: (i) an overall close read of the transcripts for references to media sources and (ii) keyword searches using generic terms (i.e., media, television, read, heard) and specific terms derived from our news article database (i.e., *Vancouver Sun*, *Globe and Mail*, pharmacogenetic, genetically-modified). Coding was supported by Atlas.ti 5.0 software. Initial coding was challenged by authors to produce the reported representation. The presented transcript extracts were selected to illustrate points relevant to the entire data set and an ellipsis was used to indicate a continuous excerpt from conversation. The analysis sought “descriptive validity” (Sandelowski, 2000) and is intended to demonstrate points of convergence and divergence between database results and transcript data.

FINDINGS

Overview of Database Results

News articles that appeared in ProQuest databases three months before the event were analysed using the keywords “genetic” and “health”. These terms were used because the

Table 1 Sources for database articles (n = 80)

Source	BC newspapers (i.e., Trail Times, The Vancouver Sun)	National or American news distributed in Canada (i.e., Globe and Mail, Newsweek, Time (Canadian edition))	Newswires (i.e., Canada Newswire, Canada Press Newswire, CCNMatthews Newswire)	Non BC newspapers (i.e., Winnipeg Free Press, Toronto Star)
Frequency (percent)	8 (10%)	17 (21.3%)	26 (32.5%)	29 (36.3%)

Note. Percentages may not equal 100 due to rounding error

search parameters were sufficiently broad to include a number of significant articles while remaining narrow enough to avoid unrelated concepts. Other key words such as “biobank” produced an insufficient amount of hits. Of the 80 total results, approximately 10% emerged from BC sources (Table 1).

For the purposes of this analysis, news articles from the most likely viewed sources were combined (BC Newspapers, National or American news distributed in Canada, and Newswire contributions). These articles comprised some two thirds (n=51, 64%) of the total articles shown in Table 1. Note that after doubles and American only editions were excluded, this number was reduced to 41. All the articles were first characterized as primarily hopeful (hope) or primarily pessimistic (concern) and were also coded by theme. Table 2 highlights some of the most common themes that emerged from the reviewed articles.

Table 2 shows that nearly three quarters (73%) of reviewed articles that discussed topics related to genetics and health could be characterized as hopeful. There were also a number of shared themes that emerged from the database findings. The most common topic themes were (1) disease and (2) drug treatment, new tests or therapies, pharmacogenetics, personalized medicine, or pharmaceuticals, each claiming almost one fourth of the total articles. The second most common theme, appearing in about 15% of reviewed articles,

addressed topics related to (3) paediatric medicine, prenatal testing, newborn screening, or fertility treatment.

Members of the research team also kept track of significant events that may not appear in the newspaper database on an ad hoc basis. It was anticipated that these events could influence participants' views during the deliberative event or increase a citizen's desire to participate in conversations about health topics like biobanks. For example, our participants' interest in health research could have been peaked by an advertisement campaign organized by the Cancer Research Society. This campaign includes slogans such as "Wanted", "Fatal attraction", and "Bloom of doom" superimposed over illustrations of large scale depictions of cancer cells on billboards or bus stops in BC (The Cancer Research Society, 2007). American media reports on other biobanks may also have increased participants' interest in the 2007 event. Examples include those at the Puget Sound Blood Centre, partially funded by the US Defence Department to improve knowledge of blood type identification methods (Ostrom, 2007) and the Kaiser Permanente biobank, which wanted participation from half a million northern Californians to study gene environment interactions (Feder Ostrov, 2007).

Unfortunate occurrences such as the theft of a researcher's laptop, which included personal health information of 2900 current and former patients of the Hospital for Sick Children in Toronto (Howlett, 2007) or the theft of 19 vials of HIV-infected blood from St Paul's hospital in Vancouver, BC, may also influence event conversations. Events such as these, which may not appear in database searches under key terms "genetic" and "health", may nonetheless increase participants' concerns over the security of biological samples despite the fact that in the St Paul's case, all vials were eventually returned by individual(s) unknown (CBC News, 2006).

Analysis of Participant Transcripts

Media as a theme. Our analysis of the transcripts revealed that media reports did in fact frame participant discussions and further, small group discussions that referenced to the media were most likely to refer to pop culture media sources (Table 3). The most frequently cited media source was movies followed by television. Both large and small group discussions drew on specific news stories equally and media coverage of biobanking was only raised twice and only in small group discussions.

Participants spent some time deconstructing the media as a communication vehicle during small group discussions. On a few occasions, deliberants discussed the potential for the media to inform the public. One small group paid particular attention to this theme, suggesting that generic "media", in the form of information centres, might be helpful for biobank organizations to incorporate into their design to create transparency and foster

Table 2 Most likely read articles-characterizations and common themes

Broad Characterization	Frequency	Percent
1. Hopes	30	73.2%
2. Concerns	10	24.4%
3. N/A	1	2.4%
Themes		
1. Disease (new discovery, new treatment, gene environment interactions pandemic)	9	22%
2. Drug treatment/ new tests or therapies/pharmacogenetics/ personalized medicine /pharmaceuticals (disease, discovery)	9	22%
3. Paediatric medicine/prenatal testing /newborn screening/fertility treatment	6	14.6%
4. GM food /agriculture/animal research	4	9.8%
5. Public education (disease, health)	4	9.8%
6. Industry (research, information)	3	7.3%
7. Privacy (personal information)	2	4.9%
8. Other (correction, health an important topic for Canadians, misdirected research dollars, new employment opportunities)	4	9.8%

Note. Percentages may not equal 100 due to rounding error.

public trust. Participants suggested that these centres could produce pamphlets, hold press conferences, and address risks and benefits on a website or through a toll free telephone number. While this concept is broader than the role usually associated with the news media, we perceive it to underlie the participants' desire for additional, in-depth information on biobanking issues that the news media are not providing. As one participant stated:

The media are swamped with everything from news about sports to, you know, world events and some local stuff. It's hard to put stuff on there, I think.

Participants were also aware of some of the challenges facing media coverage and discussed these issues on three separate occasions. Topics included the potential for media reports to be overly simplistic, overwhelming, and potentially unreliable, or to include conflicting results. The power of the media to inform citizens was also addressed on one occasion.

In large group discussions, a view of media coverage as potentially problematic was contrasted with the view that the media were distinctly helpful in ensuring accountability in biobank policy. Interestingly, these different views on the role of the media arose independently in two different small groups. During large group discussions, some participants expressed surprise at how they had diverged on the topic of the media:

We were busy sort of looking at the media as being problematic and, you know, reporting...in erroneous or inaccurate ways on different studies...and you guys [another small group] brought in the media as being a very positive thing by being transparent...

Quantitative analysis. We now turn to comparing and contrasting the above database results against the above findings from the small and large group transcripts. The analysis indicates that the quantitative media database was useful in predicting what topics would emerge during group discussions and the general state of optimism, but could not predict how participants used media sources in their discussions.

Hopeful media coverage. The database analysis revealed that nearly three quarters (73%) of reviewed articles that discussed genetics and health could be characterized as hopeful. Participants of the event were also hopeful about the potential benefits of biobanking and most agreed that regulators should take measures to ensure their efficiency and success (Burgess, O'Doherty & Secko, 2008). Participants often equated their hopes to the search for cures to diseases, as two participants exemplified during small group discussions:

Table 3 Overview of transcript analysis

Sources	Times mentioned	
	Small group discussion	Large group discussion
Movies (medical horror, GATTACA, The Corporation, 1984, documentary, Terminator, Dr. Evil from Austin Powers)	7	----
Television (O.J. Simpson trial, Jeopardy, 24 television series, Cold Case Files, Quincy, talk shows, Boston legal)	6	1
Specific news story (blood transfusions and Jehovah witnesses, person be exonerated by DNA testing, tissue donation and consent, women living with AIDS, Moore case in California, Tainted blood scandal –blood samples stolen , Canadian Blood scandal)	4	4
Media coverage of biobanks	2	----

I am most hopeful about is potential medical advances and breakthroughs, new cures, new medicines and new procedures, whatever.

My hope is actual cures, not just promises.

It is important to note that participants also voiced many concerns about the risks of biobanks. These included concerns over whether their privacy would be protected, that biobanking would be solely a profit-oriented endeavor, about how consent procedures for giving samples would function, and who would own the biobank and control access to its materials.

It was in the context of hopeful results that references to the media over-blowing the reporting of scientific results arose. This concern was related to participants genuinely craving information on scientific advancements related to disease, but also recognized that people experiencing diseases are often desperate for hopeful avenues of treatment and that they themselves can, and have been, misled. One participant put it this way:

...the latest drug that comes out and then people pick up on that... they go off on what may prove to be a negative course as a result of what they read. Because they don't go to the study itself, they just take what was read or what was written in the media.

Such comments, which the deliberative setting encouraged, fueled the scrutiny of the media by participants. In fact, one small group spent a significant amount of time discussing the potentially negative influence that media reports could have on their risk perceptions concerning biobanks. The implication was that this negative influence was related to structural complaints against the media (Parkinson, 2005), as one participant put it: “[T]he media will take information, and they can skew it the way they feel, or their sponsorship wants them to do it.”

This skewing is reminiscent of remarks in the literature that the media and various stakeholders are complicit in a “cycle of hype” that can maximize positive expectations and breakthrough metaphors (Bubela et al., 2009). In raising such topics, this group of participants set the boundaries for how references to the media would be assessed, and ultimately influence, their deliberations. Likewise another small group that saw the media more positively was influenced by the media in a different fashion. We discuss this further below.

Convergent topics. The most common themes that emerged from the database review were (1) disease and (2) drug treatment, new tests or therapies, pharmacogenetics, personalized medicine, or pharmaceuticals, each (1 & 2) claiming almost one forth of the total articles. The second most common theme addressed (3) paediatric medicine, prenatal testing, newborn screening, or fertility treatment. These themes also emerged in participant discussions concerning biobanks. (However, we cannot draw a causal relation based solely on the association of similar frequencies in media database and deliberation analyses.) For example, as previously mentioned, disease was one of the more prominent themes discussed during the event and was often linked to the hope of finding new cures from biobank related research. The topics of personalized medicine and new therapies were also raised at times:

What I'm most hopeful is breakthroughs in medicine and new designer drugs.

The primary benefits [of biobanks] must be the research laboratories using those samples and produce better drugs, better health care procedures...

The topics of fertility treatment and newborn screening also arose:

...a little while ago there was this lady who had a boyfriend that fertilized some eggs. There was a big court case about who owns the eggs because it's both their genetic material.

Well, I mean, you know, right when a baby's born, they prick the bottom of its foot to take a sample to test it...

However, while the themes found in our article database and those that emerged from the transcripts did converge, it was seldom the case that participants specifically referenced a media report upon introducing such topics for discussion. Specific references to the media as a source of knowledge on the three most common topic themes in our database (Table 2) only occurred twice during the event. The first arose during a discussion over blanket consent and touched on the topic of disease. Interestingly, this reference does not refer to a news report or a pop culture depiction but instead, to an advertisement for research participants:

...you see things in the newspapers often where UBC perhaps wants somebody...they just advertise in the paper, "Please phone if you have such and such and you would be willing to participate in the study."

While the second reference was to prenatal and newborn screening:

I read something interesting and it's about these parents who had a baby so that they could donate some tissue to their already-born child to cure their disease.

Consequently, while it is a reasonable hypothesis that references to "a big court case" regarding who owns fertilized eggs are based on information garnered from media reports (especially in light of a body of research that supports the media as an important source of knowledge (Best and Kellner, 2001; Nelkin, 1995; Rogers, 1999), the transcripts of the event reveal that participants usually did not locate, or self-identify, their knowledge or interest in

Table 2 topics as originating specifically from media reports. Instead, participants used media references in other unique ways, which we turn to next.

Qualitative analysis of participant transcripts. In this section we discuss the unique, and unexpected, role that media references played during the 2007 event. We pay particular attention to the ways in which media references were used (1) as a source of new discussion topics; (2) to rally and reinforce discussions; and (3) as a source of comfort for deliberants. As table 3 shows, these references to the media occurred mostly during small group discussions.

Media as a source of new discussion topics. On several occasions, new discussion topics were introduced based on what people had read or watched. For example, during a small group conversation regarding drug company profits, a participant raised the issue of whether individuals can be forced to participate in research if they have a unique phenotype (in this case, an African woman who is resistant to AIDS). This topic was interjected based on what the participant read in the news, as evidenced by the individual stating “I think I heard it on the news or something.” Two other participants responded that they also saw the media stories, with one recalling: “oh yeah, she was on TV.” This sparked a conversation on the ethical use of research subjects that included only these three participants. Others in the group were initially excluded until the facilitator broadened the topic and asked for input from the excluded participants.

This example highlights an interesting twofold effect that the news media have on deliberations during the engagement event. Although references to the news media were used successfully by participants to interject new information and thereby new topics for discussion, it was sometimes at the expense of creating in-groups of those who were familiar with a media story. Facilitation that is sensitive to the ways in which news media references can create in-groups that may polarize deliberations can work to minimize this effect (Luskin, Fishkin, & Iyengar, 2006).

Media references to rally and reinforce. Media references also played an important role as a rallying point for group discussions when they were used as a source of common ground or shared knowledge. During these instances, popular critiques of the media were sometimes used to garner support for new discussion topics. For example, participants drew on their shared frustration with media reports that include oversimplifications or conflicting scientific information to introduce the topic of overblown hopes in scientific research. One participant put it this way:

[T]hey do a study on something -- okay, egg yolks are bad for you, all right?...another study comes up that says, "Well, no, it doesn't make any difference." You know, like it's very confusing...

In another small group discussion, the topic of cloning, a special interest to one participant, was introduced by equating concerns over potentially negative downstream uses of biobank materials with potentially negative uses of information passed on in media reports. Using this comparison, the participant gathered support for his concern about cloning humans, a topic that was not originally of particular interest to other deliberants.

Since media references emerged as a source of shared knowledge for most participants, they were often used to reinforce deliberants' arguments. In one case, participants in one small group discussion raised concerns about privacy and the potential for biobanking to be used for criminal investigations. As one participant stated:

Wouldn't that cause a problem? Like say I'm a criminal and I got stabbed or something. I have to go to the hospital. Maybe I won't go because the police will have a sample...

Others in the group disagreed with this participant stating that catching criminals by testing old rape kits, for example, was a public service that biobanks could perform, and that this outcome trumped privacy concerns. One participant then referred to an episode of a popular television program to garner support from the group for this point of view.

So, like, that would put rapists behind bars and — I was watching TV yesterday and there was a guy who was just released, innocent, 25 years. Because of DNA testing they found the real criminals instead of two eyewitnesses who put him in jail in the first place.

Although participants frequently used a media reference to explain their line of reasoning and reinforce more controversial arguments, such as blood transfusions for children of Jehovah Witnesses, this was not always a successful strategy. In some cases, controversial claims were instead refuted when participants referred to opposing facts reported by the media.

Participants of the 2007 event suggested that the public would enjoy reviewing a wide range of materials on biobanking including books and DVDs and suggested that TV shows like CSI and Cold Case Files would be preferred formats since, in the participants' eyes, they are more inclined to spark the interest of the general public. These findings highlight how varied media references were used by participants to persuade others and to foster lively group discussion that drew on the shared values and experiences of a wide range of citizens.

This is in line with cognitive psychology theory where individuals will accept messages consistent with their ‘cognitive frames’ or values (Nelkin, 1995).

Media as a source of comfort. Biobanking is a difficult topic that draws on a great deal of complicated information concerning regulatory policy and cutting edge science. Unlike other health issues that have received substantial attention by Canadian citizens, participants in this event had little personal experience on biobanking from which to draw. Indeed, when challenged on how they knew drug companies might use biobanks to pursue drugs with high profit margins, one participant explained that it was because “I watch TV” and that his opinion was “certainly not from personal experience.” Another participant said this after the first day of the event:

Everything I learned yesterday was pretty much new. I mean, you hear bits and pieces on the news and things like that, about all this stuff, but it is very interesting.

In this way, participants sometimes lacked confidence in the relevance of their opinions and had to be reminded that the deliberative event was set up to inform them on the intricacies of biobanking (see Burgess, O’Doherty & Secko, 2008). Nevertheless, while analyzing the transcripts it was apparent that media references were predominantly used by participants to foster confidence in their individual knowledge. Deliberants frequently self identified as reading or watching media reports when preparing for the event, with one participant saying they worked “quite deep into night reading dozens and dozens of web articles”.

Participants explained that this type of background research increased their confidence levels and helped them to feel comfortable when engaging in group discussions, with their reading making them trust they could “contribute something without being an expert”.

DISCUSSION

This paper originates out of a growing trend to develop and test new models of public engagement (Rowe & Frewer, 2005; Einsiedel, 2008; Burgess & Tansey, 2009). More specifically, it originates out of a wider research project that is investigating the potential of the theory of deliberative democracy to address weaknesses in informed public representation in health/scientific debates, and thereby stimulate citizenship (Burgess, O’Doherty, & Secko, 2008; Longstaff & Burgess, 2009; Secko et al., 2009). Many challenges exist in turning deliberative engagement events into an effective mechanism for

developing policy advice, but we see these challenges as worthy of investigation if we are to narrow the unequal access of some groups to shaping public policy decisions.

The role the media play in influencing the participants of a deliberative event is one such challenge, since for example, little specific data exists on if/how input and structural media complaints (Parkinson, 2005) effect the ‘communicatively rational’ discourse that is sought during such an event. The objective of this paper was therefore to track and analyze if and how the popular media, in this case primarily newspaper reports, influenced deliberations during The BC Biobank Deliberation. Our analysis revealed that participants did in fact draw on media reports during discussions and further, small group discussions were most likely to refer to fictional references from popular culture such as television shows and movies (Table 3). This is particularly interesting in light of the common focus on the news media when researchers discuss the media’s relationship to deliberation (cf. Gastil, 2008). This finding serves to reinforce a blind spot in the literature, which Gastil (2008) effectively sums up as the recognition that “there is more to the deliberative media diet than news alone”.

We ourselves are not immune to this blind spot as we did not track any fictional portrayals of health issues in the approximately five months before the 2007 event. Given the results of our analysis, it is clear this would have been an informative endeavour. Those interested in analyzing media influence on deliberative events would therefore be wise to broaden the scope of their analysis to include fictional accounts of event topics in addition to media reports, as both play a significant role during deliberations.

Furthermore, the analysis of participant transcripts revealed that the frequency of topics in the quantitative media database had a strong association with topics that emerged during event discussions. The database results were also useful in predicting the general state of optimism for participants. However, they could not predict how participants used media references in their discussions as demonstrated through the qualitative analysis that was also performed on the participant transcripts. This latter analysis demonstrated that media references instead were used: (1) as a source of new discussion topics; (2) to rally and reinforce discussions; and (3) as a source of comfort for deliberants.

In terms of theories of agenda setting (Scheufele, 1999), the finding that the issue of biobanks has yet to make a significant appearance in the Canadian news agenda (i.e., searches using the term “biobank” produced an insufficient amount of database hits) predicts that deliberants would not extensively reference biobank-related news reports, since the public agenda would have yet to be widely impacted in this regard. This did bear out, and indeed, the extent of references to the media overall during this event was quite low. We found that particular types of media sources were uniquely referenced 19 times during the small group sessions and 5 times during the large group sessions (Table 3).

Despite the low number of references to media sources overall, it was clear from the transcripts that these references served to catalyze particular conversations during the event (see the section ‘Qualitative analysis of participant transcripts’). Here it is important not to overstate the effect that references to media sources had on the event, which dealt with a complex topic and contained elements that were designed to inform the participants on the intricacies of biobanking (Burgess, O’Doherty, & Secko, 2008). Nevertheless, the results highlight that those conducting deliberative engagements should be prepared for a range of effects that the media may have on participants.

CONCLUSION

Given the influence that the media appear to have on deliberations, others who wish to conduct similar events in the future should be aware of certain challenges that media references may pose for deliberants. Although media references were used successfully by participants to interject new information and thereby new topics for discussion, it was sometimes performed at the expense of creating in-groups of those who were familiar with a particular media story. Facilitation that is sensitive to the ways in which media references may create sub-groups that polarize deliberations can work to minimize this effect. Those designing deliberative engagement events should also seriously consider tracking media before their event so as to better understand and prepare for how media references might be used to persuade/dominate others versus fostering lively group discussion that draws on shared knowledge. Lastly, we would encourage other deliberative democrats to include media sources in the background materials they provide participants. Deliberants of the 2007 event stated that reviewing media sources on biobanking increased their confidence levels and helped them to feel more comfortable when engaging in group discussions.

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