Day 1, Panel 3 - Research Panel: Thinking differently — What are the innovations in the journalism scholarship/profession today?

#### Moderator/Research Chair:

**Amy Schmitz Weiss**, San Diego State University — Symposium Research Chair

#### Panelists:

**Dean Graber,** University of Texas at Austin, *The Expanding Boundaries of Non-Commercial Radio: New Spaces for Online Journalism* 

**Alfred Hermida and Amanda Ash,** University of British Columbia, Wikifying the CBC: Reimagining the Remit of Public Service Media

**Maria Holubowicz,** UFR des Sciences de la Communication, GRESEC (France), *Be a Journalist within the French Regional Press at the Web Age\** 

Maria Laura Martinez and Sueli Mara Ferreira, University of São Paulo (Brazil), The "Black's Wheel": A Technique to Develop Hypermedia Narratives

**Cindy Royal**, Texas State University, *The Journalist as Programmer: A Case Study of The New York Times Interactive News Technology Department* 

\*Maria Holubowicz was unable to attend the symposium. Her paper is available online for reading.

Amy Schmidt Weiss: ...Alfred Hermida and Amanda Ash from the University of British Columbia. And we have Maria Laura Martinez and Sueli Mara Ferreira from the University of São Paulo in Brazil. And we also have Cindy Royal here with us from Texas State University. And this panel is a great panel to kick off our afternoon discussion, because each of them has a really unique perspective on what are some of the most exciting, innovative trends that are happening in newsrooms here and around the world at this moment. Basically, each panelist is going to have about 15 minutes to talk. And then if you want to save your questions until the end of the hour, we'll do a Q&A at that point. So without further ado, we're going to go ahead and get started. Dean Graber.

Dean Graber: OK. Well, thank you, Amy, and hello everyone. It's nice to see so many faces on both sides of us today. And we're going to be talking about many types of media in the next two days, and I'm glad that radio is so well represented in our discussions. My goal for the next few minutes is to focus our attention on a type of radio station and a type of radio journalism that is called community radio. And this term community radio may sound very generic and very non-specific, but when I talk about community radio, I'm talking about a very specific type of radio that we find not only in the United States, [but] in Canada, in Brazil, and in countries all throughout the world on all continents. But while the context may be different from place to place, the general principle is the same, and that is, community radio is locally owned, locally operated radio that is produced by citizens rather than by professionals. And through community radio, citizens are able to broadcast their own music, their own news, their own commentary without the filters and the gatekeepers of the other types of radio, such as commercial stations and even the public broadcasting systems.

These two systems—commercial and broadcasting—rely on large institutions and professional or semi-professional broadcasters to select and to deliver the news. And community radio is a form of citizens' media that predates the Internet by several decades, and it delivers a type of citizen journalism that has existed for an equally long time. But in the discussions and in the literature about citizen journalism, we don't devote so much attention to radio. And in many ways, radio remains the most pervasive and accessible but still understudied form of media. Some other traits of radio in the United States include its funding model, which is also reliant on the local community for revenue and support from local businesses and philanthropy. And there's a belief in community radio and community media in general that this type of support rather than advertising from large commercial enterprises is the most appropriate for local communities.

Community radio is also committed to promoting democratic structures and processes and decision making in the running of a station, and it also has a commitment to involve groups that are missing from mass media. Now this certainly doesn't mean that they always succeed. We see successful practices in many stations, but the politics of community radio stations can be very destructive over issues of governance and decision making, and arguments over racism and sexism and class issues are not uncommon.

While a lot of media are struggling to survive these days, we see a lot of growth in a form of radio called low-power radio, LPFM, which is an umbrella term that's used to describe small local stations that operate with less power and smaller antennas than the traditional stations. These signals, as we'll see, they may only reach a radius of three or four miles. And I'll talk more about how Internet extends the reach of these signals. But first, I want to mention that we are likely to see in the United States hundreds—and some say more—of new low-power radio stations in the next few years. A bill called the Local Community Radio Act, which has already passed the House, the

Senate version could face a vote soon. So you're probably likely to hear more about low-power radio as the year goes on.

The most fascinating thing for me about community radio, both as a former producer and as someone who's now observing with a little more distance, is that these stations form very distinctive and eclectic, very vibrant local radio communities both on the air and on the ground. And I think it's important to note that community radio involves regular face-to-face contact among producers and volunteers and that it's based on constant voice-to-voice contact with audiences. Community radio also involves a collective process and a collective product. It's not a solitary process and computer screens don't substitute for this. So this is something that distinguishes community radio from other forms of community media.

As I move toward the core topic of online journalism, I'd like to first show you a few examples of the type of radio stations that I'm talking about. This station, on a much sunnier day, is KBOO-FM. It's an urban station in Portland Oregon. This photo was taken by one of its members. It covers the entire Portland area and beyond in Oregon. And it's an example of a station that emerged and modeled itself after the first wave of community radio stations in this country. The first one of those, KPFA-FM, signed onto the air in Berkeley, California in 1949. It was formed by peace activists and they later formed the Pacifica Radio Network which produces its own national and local programs. KBOO is a Pacifica affiliate which broadcasts the Pacifica stations. but it also has its own local news department, and it produces daily local newscasts which is broadcast on the radio and it posts online. Now the news department, like many of the functions of community radio, is staffed mostly by volunteers. Some stations have a paid part-time staff who coordinate the various function, news being only one of them. And I should say that while I'm dealing today with local news, music is really what's at the heart of community radio in stations like KBOO. Music is the magnet and music is the glue. And I think that the best phrase to describe community radio's approach to music is the slogan of KBRX-FM, which is a local studentproduced radio station here at UT, which proudly says that it plays none of the hits all of the time. And you can hear that for yourself if you're on the radio dial tonight and you are at 91.7 FM. This is a characteristic of community radio—the non-commercial emphasis.

Now for a contrast, this is the home of a radio station in Clay County, West Virginia, WYAP-LP, low-power. It's the only local medium in a 342-square-mile radius in Southern West Virginia and it broadcasts music and local news and conversation 24/7 every day of the year. Here, what is here is a photo of two of six candidates for local office being interviewed live on the radio. And I think it's an excellent example of how this newer, smaller model of radio station with hundreds more on the way are becoming not just sources for music and local news and information in communities that may not have local media anymore or that may not have ever had them in the first place. And the Internet can extend that flow of news and information to the

surrounding areas in ways that no other media is able to do. So KYAP is proud of the fact that its broadcasters include middle school students, high school students, and seniors, and that its audience stretches far beyond the West Virginia mountains.

I want to add just a few more reasons about why I think it's important to be studying community radio right now. I've already talked about the growth. The truth is, we really don't know how many community radio stations exist in the United States. The leading national group has more than 250 member stations, but many stations don't participate. And in addition, some of the low-power radio experts say that there are already 800 LP-FM stations either on the air or in the process of coming online. So it's impossible to have a definitive census. We do know though that the applicants of these new license are community groups, schools, libraries, and also churches. So now that there are opportunities for smaller radio stations to come online, we may see a shift in the type of programming that is on the air and a shift in the ideology from its position to the left, where most of these stations are located on the radio dial and in the political spectrum, [to] the opposite way. So we may be seeing some of the culture wars that we see in radio and TV extending to these smaller communities as local communities get more radio options. It's something that I think we're going to be hearing more about.

What do we know about community radio? Well, there's some excellent histories of the individual stations and of the movement. There's case studies of best and worst practices [of] individual stations, but the scholarship about community radio has developed mostly in the fields of development studies and in alternative media. We find less of it in journalism. And in my own work I'm interested in placing the history of community radio stations and community newspapers into our local urban history, such as the history of Austin, for example. Because when we do that, we see that there's a tradition of media activism in citizens' journalism that has been on the ground and on the air all along. And so this type of activity actually laid the groundwork for some of the digital activism that came along later.

What we don't know—and this is my main research question for this paper—is, how are community radio stations using the online environment to deliver news and information? I just want to briefly say that in studying community radio I've drawn on some of the urban fieldwork conducted by an urban sociologist who started out in the Chicago school who studied the role of local media and formation of community identities. Habermas's concept of the public sphere has also been useful to many radio scholars. And I used John Downing's discussion of alternative media, and a scholar, Clemencia Rodriguez, who is from Bogota, Columbia, now at the University of Oklahoma, who coined the phrase, the term *citizens' media* in her book in 2001 "Fissures in the Mediascape." It was an international study. And she's still doing work in Columbia showing how residents of rural communities who are trapped in conflicts are using radio as a form of citizens' media even when it's unsafe for them to do factual reporting about things that are going

on on the ground. I've also drawn on interviews conducted with community radio news producers. I try to keep my own radio census of the stations that exist and that are coming online. And a couple of years ago, I conducted a survey of several hundred of these radio producers that told me about the work that they do about these stations.

So for this paper I tried to make some observations about ways that I feel the community radio stations are expounding the boundaries of online news in the United States. This could lead to more empirical studies. I've talked about Pacifica Radio and how its model of activist journalism has inspired the first wave of stations from the sixties through the eighties. There's a newer generation of radio stations that have developed their own approach to news. Some of these radio producers emulate the NPR public radio style and sound of reporting the news. Some of them create their own hybrid of varieties of news. Also, the websites of community radios can be seen as gateways to other streams of national and international programming. Many community radio stations feature broadcasts from networks in Canada and English language broadcast from Europe and Asia that are not often heard elsewhere on the radio.

I want to quickly just show you a couple of examples of the Pacifica Radio programming. These are examples of national radio networks for... This is an example of a national radio network. This is an example of what a typical urban radio station with its own local news department — the type of radio that it produces. This is one of the newest populations to enter into the radio universe, [which] is young people, high school, and college students. This radio station, WRTE, in Chicago is a 24-hour bilingual, youth-produced radio station. And because [of the] youth of the producers, they have access to [the] latest technology. I also wanted to mention that Facebook has also enhanced the spread of this local radio as well.

And then finally in closing, I wanted to leave you with just these words on community radio and the importance that I feel it plays in our discussion. Even at a time of crisis for different types of media, community radio is growing. And it's really growing by doing what it's always done—allowing ordinary citizens to gain control of the radio media. And when we talk about online media today, we occasionally make reference to previous forms and experiences of citizen media, so citizen journalism and media activism, but we don't often make connections between the old citizens' media and the new citizens' media and between the community journalism that has existed for decades and the online journalism today.

So I'd just like to suggest in closing that we think about citizen journalism as a phenomenon that has a long historical timeline in many if not most of our countries. That timeline goes back as far as we care to look. It didn't start with radio. It didn't start with the Internet. It's not going to end here either. So if we view the media that we're looking at as the latest points in a long historical trajectory, I think that we might learn some things that will help us

ensure that citizens' media and citizens' journalism continue to prosper and excel long into the future. Thank you very much.

[Applause.]

**Amy Schmidt Weiss:** OK. Next up we have Alfred Hermida and Amanda Ash from University of British Columbia.

Alfred Hermida: Hello. Thank you all for taking the time to come to this. I'll be talking of this with my graduate student, Amanda Ash, who graduates in May. So if you're quick, you can snap her up before somebody else grabs her, but we can discuss that later. We're going to talk about this project that we've been involved in since last September during the R&D on a usergenerated participatory online site. [It is] essentially a Wiki about Canadian music designed to focus on Canadian music, produced by Canadians for Canadians. And this presentation comes at the first stage of the process, which really was a collaboration between CBC Radio 3, the University of British Columbia through the graduate school there, and a state agency that provides funding for R&D. What we're going to look at is, how do you go about introducing innovation within an established media. Within incumbent media organizations, how do you go about saying, "Well, why don't we try something that is completely outside your comfort zone that you don't control, that you don't produce, but we think would be a good idea?" And that's what we want to explore here. And sort of build on that to think in terms of, well, if we think about what is the role for a public service broadcaster, is a public service broadcaster a relic of the past, a relic of a time of scarcity where we needed public media, or is there a role for them in digital media that is very different to the patriarchal role they may have played in the past?

Now, this debate is particularly pertinent within the Canadian content, because public broadcasting is very closely associated in Canada with issues of sovereignty and national identity. And some of you might have guessed from my accent [that] I'm not actually Canadian, but Amanda is, so we're at least 50% Canadian up here. And studies into CBC, the public broadcaster there, have been fairly critical of how it's tried to innovate, and in fact, one scholar a few years back compared it to this corporate Titanic. That it's got so big, so bloated, how is it going to adapt in an environment where you have to be flexible and responsive? A part of the role of the CBC is to provide that Canadian voice. And part of the discourse within CBC was saying, well, if we have this online space, if we can't essentially control American companies from coming and buying out our companies or moving into our space buying our newspapers and our airways, online we don't have that degree of control. So the mission the CBC set for itself with new media was becoming the home of Canadian content. The idea that Canadian content would not be relegated to some back order of the Internet and that CBC itself would be the source for Canadian content on the web.

This project was in partnership with one part of CBC, a very small part of it— CBC Radio 3. Radio 3 is an online and satellite radio station with a remit to play independent Canadian music. It plays 100% Canadian music. And it has one of the track records as one of the most inhibitive areas of CBC. Partly because it's a radio station, but not as we know it, you know? It's designed to be online. It's designed to be social. It's designed to be collaborative. When they redid the website last year, they emphasized social and collaborative tools. Much of the music that gets played has been uploaded by musicians themselves and it's played there. It's been described as the country's best in secrets. So when we look at this in terms of innovation literature, you see that Radio 3 is an organization that essentially is at the edges of this big corporation known as the CBC. It's an online only station, so it doesn't have the legacy of being a broadcast station like that. And it's based in Vancouver, so it is very, very far away from the mother corporation, Toronto, and that in a sense gives it that freedom to experiment. I'm going to hand it over to Amanda to talk about her work in the research and development of this Wiki now.

Amanda Ash: All right. Thanks, Alf. As Alf said, I spent the last eight months working for CBC Radio 3. And that time was spent researching best practices, browsing current Wikis, looking at academic sources, and basically coming up with a viable vision for a Wiki. Through my research I knew and we knew, Radio 3 knew that usability was going to be key. We also wanted a wide range of social features for later implementation. So initially we went with Tiki Wiki Software because it offered a WYSIWYG editor and a wide range of different features including polls, chat rooms, language translator, etc., but there were issues with making the software easily compatible with Radio 3. So one of the main goals was to have the Wiki self-populate with the information from Radio 3. So when a new band went onto the Radio 3 site and uploaded their biography or any information, we wanted there to be a button that would basically allow them to upload that information directly to the Wiki to self-populate it. So ultimately we changed the software to a ScrewTurn Wiki to allow for that possibility in the future.

So some of the Wiki features at launch included a main page featuring RSS feeds of various Canadian music news websites. And here there's two different designs. We have the main page on the left and a sample artist page on the right. So this is what we hope it will look like. So the main page will feature RSS feeds of various Canadian music news websites with different search functions. You can search by page name or search within a certain category. There will also be the ability to incorporate internal RSS feeds so that recently updated pages and recently added photos would pop up on the front page. We also hope to implement an FAQ section. We will have a section that kind of outlines how to use the Wiki, how to contribute, what to contribute, but we will also have an FAQ page for users to turn to each other for help and also to create discussion on what other features this Wiki could ultimately include. We also have a blog section where professional

music blogs are included on a non-editable page, but there will be another page where users can add their own hobby blogs, hobby music blogs.

As for outreach, CBC Radio 3 power-users, we want to promote it within Radio 3 heavily, so for example on various host shows and through podcasts. We want to train the staff on the Wiki, so they are completely fluent and can promote it within the company itself. We also want to encourage edits and page creation within Radio 3 before launch within the staff of Radio 3. Website placement and promotion on the Radio 3 website itself. We will be featuring it. And we will also aim to do some internal promotion for the Wiki, which includes doing interviews or profiling it on CBC Radio Q or The Hour, etc. External promotion is also a possibility; whereas, I hope to contact various Canadian music journalists to tell them about the project and to explain to them how they can become involved in the project, and also a possible festival promotion. Radio 3 does attend a lot of festivals and do a lot of festival coverage, so it'd be great to get a table or some sort of promotion set up at those festivals.

As you can see with the design layout here, the Wiki design, it's very easy to use, it's very attractive, and it's very intuitive. It fits within existing technology; hence, the last minute switch of the Wiki software to a program that fits with CBC's existing .net infrastructure.

All right. So adopting a user-generated Wiki model allows fans, artists, and industry professionals to contribute and collaborate. It allows CBC Radio 3 to tap into expertise and enthusiasm of the audience. The audience, therefore, is no longer just a consumer, but also a producer of content. Arguably, CBC would not be able to create an online resource on Canadian music in house without devoting significant funding and staffing. The CBC Wiki can be described as a crowd-sourcing Wiki providing a means of covering material which could not have been produced in house, probably for logistical reasons, but which becomes possible through Wiki technology. By using Wiki software, the role of the CBC shifts away from being a content creator, and instead, the public broadcaster becomes a facilitator of content.

So Wikis by their very nature are collaborative projects based on the willingness of unpaid professionals to contribute their time. For established media organizations where production processes are based on a system of strict editorial checks and balances, the notion of allowing anyone to publish anything can be daunting. The quandary for CBC is that the success of the Wiki will be largely be dependent on the ability of users to contribute freely. Yet at the same time, the broadcaster will seek to minimize defamation, copyright infringement, and other legal issues. Wikipedia is one of the most prominent examples of a collaborative knowledge system, with studies suggesting that its strength lies in achieving a critical mass of contributors. An active engaged community is a key factor in the success of a collaborative project such as the Canadian music Wiki.

So CBC Radio 3 is in a position to reach out to its existing user base as early adopters and content generators. There are some indications of a positive reaction from the community of listeners to the Wiki project. Over my course working with Radio 3, I have blogged the project regularly and a lot of the users seem really excited to have a collaborative resource like this joined with Radio 3. So Radio 3 is tapping into a preexisting and committed audience which may help to alleviate concerns about the quality of Wiki content, as Radio 3 listeners would have a vested interest in the success of the project.

The adoption of an open collaborative technology fits within the approach of the CBC Radio 3 mandate. Content is in line with the support of independent, grassroots, Canadian artists who largely rely on self-promotion and word of mouth rather than on major record labels. At the same time, the Wiki is not designed as an exclusive space, but rather as an open creative space for fans of major label artists. As a public broadcaster, the CBC is bound by a mandate of cultural requirements that are not necessarily necessary of private broadcasters requiring it to broadcast at least 50% Canadian popular music each week. Being entirely based on Canadian content, the Wiki far exceeds these requirements and creates a digital space that is strictly Canadian. On a broader scale, the notion of a user-generated Wiki based around music might be particularly suited to the participatory journalism on the Internet. Music has historically brought people together through shared tastes. Social networking attributes of Web 2.0 could act as an extension of the connections between music, space, and place.

The funding of the Wiki can be considered an example of how innovative media projects could be financed at a time of economic constraints at journalism organizations. The Wiki Project was launched in the same year or hopes to be launched the same year that CBC announced plans to cut up to 800 jobs in an effort to make up for \$171-million budget shortfall in the 2009-2010 year. The Wiki Project was funded through a collaboration between a public broadcaster, a public university, and a government run agency as Alf mentioned. This specific project highlights the role for journalism students as a catalyst for innovation in the media. The Wiki proposal and subsequent funding was channeled through the Graduate School of Journalism at the University of British Columbia with myself assigned to complete the work. And the Wiki Project could be considered as an example of what is described as a teaching hospital model: a professional education with its journalism students gaining practical experience while under the tutelage of journalism educators. So I'll turn this over to Alf for now.

**Alfred Hermida:** Thank you, Amanda. So of course like with any study, there are limitations and one of the issues we've had is the Wiki hasn't launched yet, so we haven't been able to evaluate its performance, visits, edits, contributions, etc., but we've also learned something about innovating even at a fringe organization within a large corporation. Technology always

takes much longer than you expect. There is a Canadian bias to this study, because there is a very specific cultural and national context in the role of the public service broadcaster to promote Canadian content. And part of this was based on Amanda's experience so there is an inherent personal bias that may influence the final outcome. But when we looked at this, we say, well, what can we learn from this experience? And one of the things that we thought came out of this is that when you want to innovate at something like a national broadcaster, you need to find a place on the edge where you can try this. Essentially, CBC Radio 3 is that kind of place. It has very specific mandates, specific focus. It's at the edges of the corporation. It's a very small part of the entire CBC, but it also offers us a way of thinking. CBC wants to redefine itself as a content provider, not as a broadcaster. This kind of content should be arguably part of its mandate. And because Radio 3 essentially exists at the fringes, we can do something like this where we can experiment and fail or succeed, but we can experiment.

Choosing an area like music also means we can minimize editorial risk. In the research that I and others have done in participative journalism, the most open spaces tend to be in the lifestyle areas [such as] travel. Music could be considered one of those spaces, where you're more willing to open to the audience, because the potential editorial problems are far lower than if you opened up this space in an area of hard news. And then this minimizes the financial cost, because essentially through this government funding agency and the university, CBC got matching funds to what they invested, so they were able to do something that they could not afford to do internally. And they had somebody—a journalism student—working there part-time the last eight months. And taking a step back and saying, well, if we think about what radio is, what music is, this is a way of rethinking music as a collaborative experience. And instead of saying we're sharing by going to see bands or talking about it with our friends, we can share this online through our Wiki. Thank you all very much.

#### [Applause.]

Amy Schmidt Weiss: OK. I have a slight program announcement to make. Maria Holubowicz, who was going to be here from France, unfortunately could not make it today because of the volcanic ash situation with the airport. So she regrets that she couldn't be here. But her abstract and her paper is up online, so if you want to take a look at it, you can feel free to do so and contact her about any questions regarding her paper. But she was very sad that she couldn't make it. But to move on, we have our next panelist, Maria Laura Martinez, who is going to talk with us today about her paper. We're going to bring her on up.

Maria Laura Hernandez: Good afternoon. My name is Laura. I came from the University of São Paulo, Brazil. I'm going to present you to you a technique to develop hypermedia narratives called "The Black's Wheel." As I don't speak English very well, I'd rather read my presentation in order to

avoid misunderstanding. This technique has been improved through years of research and use, and it is part of a larger multi-year research project analyzing humans and their hypermedia design. We have applied it since 2005 in many hypermedia projects of journalistic special reports and online journalism classes at the University of São Paulo. This technique I am facilitating nonlinear content design with user focus. The idea behind this technique appeared reading Roger Black's book "Websites at Work," a non-academic book, but with a great effort about narrative wheel. John Miller from Black's Interactive Bureau Company describes it in this book [as] the narrative structure used by Black's team that places narrative element in a wheel-like format.

In 2005, we created the technique called the Black's Wheel introducing the graphic inspiration to make that diagram of the narrative wheel concept and some guidelines for applying the technique. In 2009, we have improved it again by creating the elaboration document of the narrative elements. All of them become important in the education and development of this concept. We also identified some variables to evaluate the overall hypermedia project created using this technique.

The graphic representation of the narrative wheel was called The Black's Wheel Diagram and is shown in this image. Those circle represent narrative elements. Each narrative element spoke or center is independent of others, but is inserted into the narrative context complementing it. Ideally, a user wouldn't need to go through other elements nor cross the wheel center to understand the story. The navigation must be able to start and finish at any element. It is self-contained. The number of narrative elements that describe the interaction with the story will depend on the amount of available information, the number of independent narrative contents, and the daily level of story. The straight lines connecting the circle show the hierarchy of the wheel narrative elements. The center element or axis and the secondary ones are spokes, but they do not necessarily represent links to the hypermedia net.

Hypermedia navigation representation can generate a more complex diagram like this—the second one. This is only an example. There are many other navigation representation possibilities. The links structure must allow the user to command his/her own experience and contact with contents in a satisfactory and efficient way. It has to be planned and designed carefully. This first diagram is a unit structure of Black's Wheel. This structure can be replicated in one or more spokes of the wheel that represent a more complex narrative part resulting in something similar to this other diagram. Here are three examples of the Black wheel application made by working class teams that will speak really much as the three diagrams arrangements. It's important to point out that the Black's Wheel does not constitute the information architecture of the site. The information architecture can also incorporate services and other information that we draw from many narrative purpose and that are not represented by Black's Wheel. It also could give the

organization the content element for — another organization the content element for visibility purpose.

In order to assist the construction of the Black's Wheel, we had created eight guidelines that had been improved by the experience accumulated over time. Last year we also introduced the elaboration document to help with technique development process and documentation.

Aiming at evaluating the Black's Wheel technique, we've made a qualitative research based on multiple case studies that follows those methodology steps. We started with three research questions that guided our case study. The first one is, is the Black's Wheel technique understandable and applicable by journalists? The second one is, is it useful? Can it enhance the project? And the last one is, is it complete? The second methodology step is about the selection of the research methods. The case study is based on the analysis of the hypermedia design documentation made by student teams including the observation of the Black's Wheel diagram, the information architecture diagram, and the prototyped website. The observation of the participant activities in classroom is also considered. The third step is about the development of a case study protocol in order to ensure the use of the same data collection procedures for each case.

We identified some global and local variables to perform this study. The last methodology step is about the analysis of the cases. These are the 14 global and the 9 local protocol variables. OK. Here is the photo of the Communication & Arts School Building. The case study was conducted here at the University of São Paulo and focuses on the analysis of the Black's Wheel technique applied to hypermedia narratives developed in online journalism classes given since 2005. It is important to point out that the current case study is concerned only about validating the proposed technique and not the students' work. So in order to protect privacy in all data collections, team project's authors will not be defined.

We had 30 hypermedia works with student teams made since 2005. Each picture shows the HTML or paper prototype of the home page of each project made. Each semester we had nearly five to six student teams applying the Black's Wheel for the development of hypermedia special report projects as part of a more general user-centered web design method. Working teams start the semester by choosing a linear special report created by a team member for a traditional medium, such as print or video reporting. This choice allows for choosing only theoretical and practical study of hypermedia design in the short span of time available in the semester. Despite being a story developed to another medium, the hypermedia transformation of the story structure often highlights spaces unused by traditional media and requires recreating the agenda by planning the creation of new multimedia and textual contents for using on the dominant user profile.

The application of the Black's Wheel technique by the teams is based on discussions and brainstorming which help to identify the composition of the elements of the narrative wheel and its graphic representation. The whole hypermedia project guide the final prototyping of the site that is not necessarily a final website, but only works as a proof of concept and could be a paper prototype as well as a HTML prototype. At the end of the semester, the teams compulsorily hand in a written documentation of the page of all the stages of the hypermedia design, conceptualization, and construction, including the nonlinear narrative.

Well, in order to form the sample universe, some of these works were selected. The selection criteria was that they had used graphic expression to describe the Black's Wheel. Here we have the Black's Wheel diagram representation of the selected projects. Even all of them having used the Black's Wheel concept, only 17 out of 30—that is 57%—developed it graphically. Those who described the Black's Wheel textually but failed to draw the diagram were discarded. From the universe of 17 works selected, two works were chosen to be analyzed that present somehow differentiated graphic representation of the Black's Wheel. It is important to point out again [that] this choice aims to the assessment of the Black's Wheel technique, which does not disqualify any of the sample universe works.

This is the Case 1 homepage HTML prototype. Case Study 1 is a special hypermedia narrative report about human beings traffic. The main proposal of this site is fighting against human being traffic; particularly, those for the proposal [were] women's sexual exploitation, providing informative sources about the subject.

Case Study 2 was made local by our esteemed student reporter on the French Guiana, a country neighbor in Brazil, by means of human stories of a region that doesn't usually receive attention from the media. The proposal of the group was to present the news as it was originally conceived adding background information to it.

Case 1 shows a creative navigation representation into the wheel diagram. And Case 2 was represented using a unit wheel with a lot of first level elements all connected with each other. We applied our protocols global and local variables to both cases in order to analyze the applied Black's Wheel technique. We also observed the respective information architecture diagrams.

The case study analysis led us to the execution of the research questions. Our first research question was, is it understandable and applicable by journalists? The documental analysis shows that Case 1 generally succeeded applying the technique in 2005, second semester, and could distinguish clearly between the information architecture in the Black's Wheel. Also, observations made in class show that students commonly apply the technique without much difficulty. Nonetheless, we identified two problems.

The first one is some teams prefer to describe the elements in the wheel instead of drawing it. Only 17 out of 30 projects drew the diagram. The others described it textually. This probably has happened because many of them think about the story using only a diagram of Black's Wheel and they don't think about the navigation in this stage of design delaying this concern to the information architecture stage. The second one is, as illustrated by Case 2, that some things mix information architecture and Black's Wheel concept. Case 2 included elements in the Black's Wheel that don't belong to the story narrative content, such as who we are, site map, recommend the site, and content. A possible strategy to work on both previous problems would be to use case study as part of the didactic approach of the discipline in order to teach these concepts and improve its applicability.

Our second research question was, is it useful? Observations made in class showed that the application of the technique usually causes fruitful quarrels around the nonlinear storytelling that help breaking traditional writing models deeply rooted in our student thinking. The case study documental analysis also showed that Black's Wheel facilitates understanding at a glance the whole nonlinear story and its constituent elements and may highlight the lack of content that could enhance the story. On the other hand, the global and local protocol variables used to analyze the Black's Wheel technique also showed to be useful to access the hypermedia narrative by identifying the project's weakness and strengths.

Our third research question was, is it complete? Observations made of its use in classroom in the documental analysis led us to believe that the technique isn't complete. Also, it can be applied to the development of nonlinear narrative with some success as previously seen. The graphic diagram needs a better discussion, our own navigation representation, because there is still no clear model for it. Case 1 uses a creative representation of the navigation; however, this representation doesn't match completely the information architecture's navigation presenting some divergences. Also, journalistic speech models need to be rethinking on their multiple cases perspectives. Its compatibility and coexistence into a hypermedia special report isn't a consensus. The elaboration documents due to the recent introduction and application to the technique could not be evaluated in the case study yet. Their application should be monitored. Future works—we all owe the research to these questions related to them.

Concluding, given the inner complexity of the nonlinear narrative projects, the Black's Wheel, besides being at the research stage, has shown to be a graphical technique that facilitates the visualization and construction of the hypermedia structure and also an efficient strategy to online journalism classes. Wrapping up, it is an open technique that can be also enhanced with other people's contributions. Future works, we all owe the development of [an] online database that could collect and document cases as an open repository that would help the technique research and development. The

protocol variables that have been identified in this research could be used to standardize the information collection.

OK. Thank you all for sharing your time with me. You can contact me at my email. Feel free to ask me if you have any questions.

[Applause.]

**Amy Schmidt Weiss:** OK. We have our next and last presenter, Cindy Royal, who's going to come up and talk with you guys about her research.

Cindy Royal: Good afternoon, everyone. I'm Cindy Royal and I teach at Texas State University, which is just about a half-hour down I-35 south of here. You may have seen a few other Texas State people in the room. I have a group of students that are with me here today from Texas State. And if you have an opportunity to meet some of them, I think you should talk with them because they are awesome. I was a PhD student here at UT. I think a lot of you know that, so I'm always really happy to come back here and join the symposium. And I have been at all the symposia. [laughs] Because the year that I started in the PhD program was the first year that Rosental had this event, and he invited me before I was even in the program to come to the very first one. So I'm always excited to be a part of this, and I'm always excited to see old friends, new friends, Twitter friends, being able to keep up with everybody. It's really like coming home when I come to this event.

So I had this really great opportunity to visit *The New York Times* last summer, and I want to share that with you because it was a really great and fun project. I'm very, very interested in how news organizations are being innovative, how they're using data, and this idea of user engagement, how you give users things to do on the site, this whole idea of user experience that we didn't even talk about the symposium last year. So *The New York Times* is one of the most innovative in that regard. And as I said, I had the opportunity to go visit them to take a look at their organizational processes, because I figured that other organizations would want to be able to develop similar competencies, as well as journalism schools would want to start understanding what students needed to know to be able to do these kinds of things in the future. And I am firmly committed to the idea that this is just a new way of storytelling and this is just the beginning that we're seeing this innovative type of storytelling.

So just in terms of my method, I did an ethnographic observation, but I was only able to spend one week with them, and I hope in the future that I can spend more time with them. I visited *The New York Times* Interactive News Technology Team, and I basically hung out with them, I observed them, I went to all their meetings, and then I had in-depth interviews with every single person in the department. Hours of interviews. There were like eleven hours of interviews that I had. I used a Mechanical Turk. Jake, I think you told me about it last year when we were at this event. So, you know, you

learn things from people at this event. Amazon's Mechanical Turk—you break the audio files up into five-minute increments, you put them online, and literally, I would just like leave the room and come back and all these files would be transcribed for me, so it was very effective and very cost effective as well.

So I went into this with some idea of the frames of observation that I would be studying. I wanted to learn something about the background and education of the people in this department. Who are these people? Where do they come from? How do we grow them? The department processes, the culture of the department, and any sort of recommendations they had for integration into media curriculum.

And so here's a little bit of the back story. This particular department was created in 2007 and it was proposed by Aron Pilhofer, who is the editor of the department now, and Matt Ericson, who is the deputy graphics editor. And I met Aron two years ago at this symposium. I sat down with a plate of barbecue next to him. Didn't know who he was. And I was like, "So, what do you do?" "I work for The New York Times." OK, I'm listening. "What do you do at The New York Times?" "I work in the Interactive News Technology Department. We do these data-driven interactives." And he kind of looked at me like, "You probably don't even know what those are." And I'm like, "Oh, rent versus buy." Oh, I was naming all of them. "I'm like a huge fan." He probably thought I was a groupie or something. And little did he know that I was about to ingratiate myself to him in any way I could possibly insert myself into what they were doing, and get involved in their organization, and learn as much as I possibly could about this really fascinating group. So after that, I attended one of his workshops at ONA where he did a Ruby on Rails workshop that I learned guite a bit at. I invited him to Texas State a little bit more than a year ago, and he did a fantastic event with us at our school. Really got our department thinking about the ways that data was part of the future of journalism and programming. So I have to thank Aron a lot for allowing me to visit the department. And his group could not have been more gracious. I mean, they allowed me to come spend a week with them, gave me pretty much unfettered access that I was able to — and unfiltered pretty much. I could see everything that they did. And everybody there was quite transparent, quite open, and quite excited, as you'll see from the comments that I have about what they're doing.

So the goal when they created this department... Oh, and I should point out, I mean, Aron is the one on the—they call this the boy band photo—Aron is the one, you know, on my right at the top there, and Matt Ericson is the one sort of in the forefront there, the second to the left over there. And then there are some other people who actually work at *The New York Times*. Andrew DeVigal, Steve Duenes, and Gabriel Dance are all in that picture. That was a picture from a *New York Magazine* article that they wrote about their activities there that came out right before we had our event at Texas State. So it was very timely that they were getting this press and then we

had him come to visit with us. So his goal and Matt's goal when they assembled this department was to get a group of developers/journalists—nobody even knew what that was back then—doing projects on a variety of projects cutting across all desks. So to be able to do things with politics, with sports, and with investigative journalism. Hire people fluent in journalism and programming. Who are these people? You know, do they exist? Understand editorial needs. Develop functionality that would also engage users. And the titles of the people in the department are a little bit misleading, but you can see the different names of the titles that the people have. Aron just did a post on the Media Shift Blog about, what should I really be calling these people? So maybe some of you have some ideas that you can share with him about that, because using *engineer* in a title is a little bit misleading. Programmer journalist, hacker journalist, coder journalist. They've come up with all sorts of things and nothing quite seems to just really capture what they are doing.

So here's some news product examples. This one, "Rent Versus Buy," that I mentioned a moment ago was actually made preceding the creation of the department, but it was one of the first interactive examples and one of the ones that I love to use in class. Because you can see how [by] manipulating the variables for your own personal customization, you can come up with how long you should be in a home before you decide whether you want to rent that house or purchase the house, what the break even point of that is. And in class, we talk about if you're writing a story on whether you should rent or buy, how would you write that story? Who would your sources be? You might interview a few people who rented or bought. You might interview a realtor. But then how do I, the reader, make that decision for myself? Am I more like this person? Am I more like that? I mean, they are kind of left on their own to figure it out. And so this in and of itself makes the story very personal to the individual reader to help them make that decision. So whether this is a stand-alone project and it's the story or it's related to a story that was written on the topic—in this case it was, there's a related story—but it's a very important aspect.

This particular project "Toxic Waters" [is] kind of important if you might want to see if your drinking water is poisoned. So you can look it up. You can go to your... Luckily, Austin has pretty safe, clean water, so we're good here. They just won an IRE medal for this particular project. It's an extensive project, but this is just one portion of it where you can actually look at the data in your region to find out the quality of drinking water. Then they also did one on "New York State Test Scores." If you're very interested in your locale in New York, you can check and see how your schools match up against the other schools in the city. And basically, you just put in... The user interface on these is not very difficult. In most cases, you're just doing one or two things as the user, and then you're getting a wealth of knowledge and information.

And this is a fun one. These are called The Word Train. Some of you may have seen these on *The New York Times* website. They did two. They did one during the election and then this one is called "Living with Less." And basically, they just asked readers, "How do you feel about the economy? Give us one word that describes your feeling." And then the only other thing they asked was whether you were employed or unemployed. So then you can start looking at how employed people feel versus unemployed people feel about the economy. They asked people on the night of the election, "How do you feel tonight?" They asked if you were Republican or Democrat to see the different ways that people felt about that. And this doesn't really capture it, because the words sort of march by when you're actually looking at it interactively on the website. So those are just some examples of some of the things that they have created in that department.

So I asked the people, you know, "What's your background?" thinking that they were all some sort of techie, computer science types. But really out of the eleven people in the department, I found only two had what I would consider to be very technical, formal educations. Most of them had degrees in different fields and had just sort of gravitated to technology and computing on their own. They had degrees in art design, anthropology, English, history, urban planning. I mean, everything but computer science that you would think. Then many of them, not all of them, but many of them had worked in journalistic settings. Some of them had had other, what I would call, more innovative media experiences working for tech companies that were sort of media focused, but I would say that all of them had some sort of a media focus in their background, which is key.

So as I started going through my interviews with the people in the department, I was pulling out big picture ideas and ways that I could kind of characterize who these people in the department were. One of the first things that came up is that most of them are self-taught. You know, I'd say, "How did you learn how to do this stuff?" "I learned it on my own." Some of them learned it on their own, started programming when they were like twelve. You know, it was just something that they did. They might not have grown up to be computer science majors, but they tinkered with software as they were growing up. Others of them found it as a necessity of a job that they were in. They were curious. There was a project. They took it on. And they were the ones who figured out how to do it. But I think the key takeaway here is that you shouldn't feel limited by the fact that you don't have a formal computer science education. "This isn't for me. I can't do that." Most of these people were self-taught. And if you have the intellectual curiosity, it's not beyond your reach to be able to do this. So you can look at some of the specific comments. "Pretty much anybody I know who has done well in programming taught themselves about it." "Everybody on our team is kind of self-taught and is able to just learn and has the curiosity and interest to just pick up what they need to know." So I think that's very important to anybody that's thinking about moving into this direction.

Selectivity. These jobs are in demand, so if you want to go out and learn a web framework language, which we'll talk about in a moment, you will get a job. It's hard to find people who have the specific skills for this job. News organizations are starting to hire computer-assisted reporting people with the specific intent of putting that data online. They are asking for this experience or skill. And what this person goes on to say is, "We're going after the same people because there's just this very small pool of people who have this skill set and are able to do it." It's definitely a growth area in the industry.

One of the other key aspects of the personnel, the characteristics of the people in this department, is they have to have some sort of passion or interest in journalism and information. It's very different than if you're just coding to make an accounting system. They have to understand the value of the story and what makes the story important. So some of the comments were, "Everyone on our team definitely gets the journalism part." Not only do they get it, but someone says, "I love the journalism pieces of it. I was building things, seeing it on the website, getting feedback, making it better." So there has to be this passion around the storytelling that also exists hand-in-hand with the programming knowledge. And it got me thinking that it's much more than just, I've got this idea and I'm going to throw it over to those tech people and let them tinker with it, and then hopefully something pops out that's usable. They have to be very integrated in the actual storytelling.

I asked them before I even went there how they would describe their jobs. And you can see a variety of the job descriptions, but all of them talk about this sort of hybrid role of being a developer and telling stories or having to deal with news. "I'm a journalist/designer/developer"—all these slashes—"of data-driven applications on news-driven deadlines." I mean, that's quite a hybrid description right there. "I develop interactive news-related features for NewYorkTimes.com with a focus on politics." Some of them have specializations. "I tell people that I help collect data and use it to build web features, applications, sites for *The New York Times*. I try to name some specific examples so that people can be familiar with that." So you can see that *they* understand when they describe their job that it's not just, "I'm a techie developer. I actually tell stories with these tools."

OK. I'll quickly go through these things then. Autonomy and accountability is very important. "We treat everybody like reporters." And I think that was another key characteristic was that they had to elevate the status of this department to be more like a journalist, to be more like they were editorial instead of, again, throwing it over the fence to the programmers. So every one of them, basically, they are treated like reporters and they get assigned their own particular project.

And then also the culture of the department is very reflective of sort of the hacker culture. They talk a lot about using open-source tools. They are very pro open-source. And that sort of culture of bringing in people with that type

of a background and philosophy has started to permeate the entire newsroom at *The Times*, where people are thinking more about, how can we share things, as opposed to, how can we hide things?

Collaboration is obviously very important. As I said, they go across all desks in all of these projects, so it's very important that they can work with other teams. And one of them even went as far as saying, "Walling off the different departments in the newsroom is going to be the death of media." So, you know, we're talking about media not surviving. One of the things that is going to be very important is that these tech people can kind of play nice and get to know and work and be integrated with the other departments.

And then also they talked about, like, if you were about to develop a competency at your organization, it's not something you can turn on overnight. They have eleven people in this department. It takes a while to learn the processes, to get the trust of the other desks. And without two or three people and four to six months, you really can't get much traction. So if you are thinking about starting to do some of these projects, these are some of the things you'll have to keep in mind.

And then I had a big discussion with them about, so what should we be teaching in this regard? And they are very vague when they answer this question. Because so many of them have been self-taught, I think they expect everyone else to be self-taught in this regard. So it's like, "Well, it's not necessarily that you have to teach them this, but they need to have web fluency. They need to understand how the web works, and they need to think innovatively. They need to be good at problem solving." So perhaps we can have discussions out in the hallway or with some of the questions about how we kind of encourage that in journalism education and media education in general.

OK. So in conclusion, one of the big things that came up when I was there last summer, the eleven people in the department, they were all men. And so this was a very — this is very indicative of the tech community at large. But I feel that there is an opportunity in a media program, where we have sometimes half and half male and female, sometimes mostly female students, that if we can engage them with technology concepts, we have the opportunity to get more women excited and interested in using technology. This could be a whole paper in and of itself, but it was definitely an observation.

Another thing is they have strong leadership. Aron Pilhofer is a visionary. One of the people in his comments about Aron said, "He's a real catalyst for action." And so at *The New York Times*, it's going to take somebody who can move mountains to say, "This is what we need to do, this is how we have to do it," and then it happens. He does it like it's seamless, like it's nothing, but this is a huge, monumental thing that he's been able to develop at that organization.

There are different backgrounds that can influence the culture of news. It has to be integrated into the journalism role. The people in the programming areas, the developer areas, have to be elevated to the status of a journalist. They can't just be like support staff. We need to encourage innovation in media curricula, and we need to talk about how we do that. I had a South By Southwest panel that sort of broached that. And then change comes by introducing diversity of backgrounds into the newsroom. Whether that diversity comes from, "Let's have this open-source culture introduced in the newsroom via programmers," or other types of diversity that we more traditionally think about, change doesn't come unless we introduce that diversity. And that is all for me. Thank you very much.

#### [Applause.]

**Amy Schmidt Weiss:** OK. Well, that brings us to the question period. If anyone has a particular question that they would like to ask our four panelists, please come on over to the microphone to ask a question. My first question while someone is walking over is for Cindy actually. In particular, I wanted to ask you exactly, how do you see this role developing in the next five years based on what you've noticed from your observations at *The New York Times*, but how else do you see it developing at other newsrooms in the U.S. as well as around the world?

Cindy Royal: Yeah. In my paper, there are some other newsrooms that get mentioned that do this. Maybe not to the extent that *The New York Times* is doing it, but I know like Las Vegas Sun, MSNBC, Washington Post, to some extent. I know The Guardian does a lot of online interactive. So there are other organizations that are doing these things. I think that other organizations will be trying to develop this competency, but they may not know where to start, so they need to be prepared for some failures, and they need to be prepared to fail quickly and get people up to speed as quickly as possible, so lessons learned and then move on. I also see that there will be more and more tools that will make this stuff a little bit easier to be integrated. Because, you know, the web frameworks like Ruby on Rails or Django already make things a little bit easier to get to the point where you can develop these. I think it needs to go another step where the average person in the newsroom can understand a little bit more about how to develop these. But at the same time, there needs to be general training, I think, in terms of data. Just understanding data and how to make data meaningful, so that they can start thinking in regard to that when they are conceiving projects, and then get these people involved as soon as possible. I think there's just so many opportunities. It's so broad right now in terms of where it can go in the future.

Alfred Hermida: Cindy, what I found interesting, because I used to work for the BBC and the BBC news website, and the BBC had a specialist team that did something very similar set up in about 2003-2004, but the roles

were very clearly delineated. You had the journalists, you had the designers, and you had the developers. They were all in one unit and they worked together, but the journalists, you know, didn't touch the code because that was the developer's job. I think it was interesting here, this evolution, in terms of those clearly delineated roles are breaking down.

**Cindy Royal:** Exactly. And that's the key to it. They may not be breaking down completely, but the walls are — the areas are blurring definitely, I agree.

Amy Schmidt Weiss: Looks like we have a question.

**Man:** Yeah. My question is for Dean. Thanks for that information on community radio. I know it's hard to get good, hard information on low-power community radio. You kind of presented this Pacifica model up there, and that's one I know coming from public radio myself, but is that really *the* model that's out there? Because I would imagine you're finding a lot of really small groups, some with their own political baggage or religious baggage, taking over this. So to what extent is that actually happening out there? Do you know?

Dean Graber: I think that what I've seen is that the Pacifica model influenced the first generation of larger radio stations, but actually I've seen a few interesting cases at LPFM that I really wasn't expecting. Last year, for example, I had the chance to meet some producers from a small radio station in Bend, Oregon called KPOV. And they presented at a community radio conference, and they were also offering a handbook that they had compiled about covering journalism for the community. And they had put a lot of time and thought into it. It was a collaboration between a local community college professor and a sports broadcaster who was very well known for his good play-by-play broadcasts in all sports at a lot of local radio stations. And so they offered this as a guide to local communities, to people who might be wanting to put news onto their air, but they also offered it to the broader LPFM community for people who might want to use it. That's one case that I've seen, but I think that if that gets the discussion started and if people start contributing other ideas—and there are dialogues that are going on about that—that we'll see a new kind of hybrid model emerge. Thanks for the question.

**George Sylvie:** I'm George Sylvie, University of Texas. I have a question for all of you. Here at the University of Texas, we just recently went through a hellacious period of trying to redefine our curriculum, and I'm wondering based on what you found in each of your studies, what would you recommend that journalism schools be doing? And don't say, "Just revise the curriculum." Give us something—[laughter]—give us something specific to teach. One thing. Only one thing. Each of you.

Cindy Royal: I can start, because I have this whole group of students who are in this advanced online media class. And on Wednesday of this week, we did Ruby on Rails in our class. And my goal is not to make Ruby on Rails developers necessarily, unless someone wants to — somebody in the class wants to run with it on their own, but to really just push the envelope of the tech skills that you can offer to students in a class and make it meaningful in the context of telling stories. So introduce data. We did the Google Digitalization API a few weeks ago. Introduce how you can easily work with data, and it's not scary, and it's not magic, and you can do it. And my role... I feel my role is to go out into the techie world, figure it out, break it down, make exercises that make sense to communication students, and then present it to them. And just experiment with things, because there are certain things that I have done that I have to just tweak every semester. It's like, that didn't work quite well. I'm going to do it a little differently next time. So in lieu of a full curriculum change, which we are going through at Texas State, I've just been trying to make little, incremental steps with the courses that I've been allowed to teach.

Alfred Hermida: I don't have one specific skill like that, but I would say what a journalism student needs to understand is how the web, how digital platforms are different. That it's not business as usual. Journalism has changed and is changing. Understand, what are the properties? What are the attributes? The real-time network, distributive, collaborative. We can talk about these terms, but give them an understanding of, this is the media world we're living in now. And that they've got to understand what's happening [and] why it's happening. We're also giving them the tools that once they graduate to keep on learning and learn the stuff and adapt to platforms that we don't know exist now. But if they understand the attributes of how the world of media is changing, then they are in a position to take that when they graduate and enter the professional world.

**Dean Graber:** I think that I would take more journalism class students out. Offer more journalism classes outside of the School of Journalism. I'm talking about in the local community. I would have journalism... I would offer a specific course for students who have basic skills, but immerse students in the community. Make sure that they know how to navigate the neighborhoods of a city or a small town, to know who lives where, to know how people get around, to know how to learn about the history of the city, where that's located, and how to use that even on deadline to write very good stories. I know that we do that now. That students have a certain number of assignments that they have to do outside of the classroom, and that involves some research and some field notes. But I think I would design a course or a program that had journalism students spend as little time as possible in a classroom or a computer lab. Just assume that they will get their stories written as they need to when they need to.

Amanda Ash: I guess, yeah, one thing, I mean, this project was so beneficial to me, because to be a student and to also partner with an actual

media organization. [Through] that partnership, I didn't just learn the experience of being a media organization, it also had an academic component to it. So with the two of them together, I think it was really beneficial to me like graduating and kind of understanding journalism today.

**Amy Schmidt Weiss:** We have time for one more question.

My question is actually related to the previous one. It's mainly directed at Cindy. The one thing that really struck me in your presentation was, first of all, that the people that you were talking to were liberal arts graduates and non-technical fields for the most part. And maybe it's just my inner history major, but we're always told that you're learning how to learn here. That's the point of the process. And given that these people seemed to have achieved their skill sets through a natural curiosity and a self-teaching and a sort of self-motivated, liberal artsy sense of discovery. I'm wondering what implications you think that in particular has for journalism school curricula, because it seems like a lot of j-school curricula [is] we are traditionally very skills based. "Here's how to write a news story. Here's how to write a column. Here's how to copy edit. Here's how to take a picture." And it seems like a lot of them, at least, have shifted to — to the extent they have shifted to digital media, they have shifted to a skills-based set of digital media skills. "Here's how to shoot video. Here's how to edit the final cut. Here's how to make a podcast." Does that give you any indication that maybe it's not just a matter of switching from one set of skills to a different set of skills, but teaching a curiosity and a more liberal artsy approach to the subject?

Cindy Royal: Yeah, I totally agree. I mean, the South By Southwest panel I had was on how do we encourage innovation in a journalism and mass communication and media program? And I believe that there's a way to teach a hybrid of skills, judgment, and perspective as long as you're teaching these skills in context. You know, it can't just be, "Here's the technical things about making a video. Click on this and make this web app." It has to be in the context of, "OK, we're going to make this app that has a story behind it." And so I think that's why I think we have such an interesting opportunity in mass com, because I've seen the liberal arts, the intellectual curiosity approach, and I think we have that opportunity, and then we just sort of pepper the technology skills into that. I definitely thing you could go heavyhanded, where you lose the storytelling, you lose the narrative quality of it. And so we have to kind of constantly be reminding ourselves why we are teaching them these skills, as well as what we're teaching today is going to be different next year and it's going to be different five years from now. So reinforcing that, yeah, what you learn now you're going to have to go off and learn on your own and you're going to have to have distance education throughout your career. You're going to have to do it on your own. Some of them will tell you they were kind of scared when I said, "Very soon you're not going to be in this class, and I'm not going to be here to help you, and you have to learn that troubleshooting skill throughout the course of the class."

Alfred Hermida: The way we do it is not just, "Here, shoot a video," but also being able to make media decisions about the story you're telling and the audiences that are going to be there. So if you're doing this video, if this is going to be your evening newscast, what kind of story would lend itself to that? How would you do that? If video is part of an online component, how does that video on the web work differently if you have text elements, if you have geographic mapping, if you have different elements? So not just about using the tools, but being able to have the critical skills to make media choices and understand the reasons. "I should be doing this like this because it helps my audience understand the story. It enhances my journalism." And that really drives everything we do, rather than just focusing on the skills, because I think if we just focus on the skills, we're shortchanging the students, because in five years time those skills are going to be out of date.

**Dean Graber:** And I'd just tack onto what Cindy was saying. I agree on the integrated approach. I believe that I would try to plant it. I believe in the immersion method for teaching students to report on cities. And so I would try to not just assign students to cover a court trial or a police incident, but try to design a course so that they could be immersed in the city, in the police stations, in the welfare offices, in the city bus system, and that they would know how the institutions and services in the city work and how they don't work.

**Amy Schmidt Weiss:** Well, unfortunately, we've run out of time for this conversation on the stage, but hopefully we can continue conversation during the coffee break which we have from now until 3:45 until our next panel. So I just wanted to thank each of our panelists today.

[Applause.]