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Abstract

Manovich (2001) describes the changes that result from translating an established cultural product into a new technology as ‘transcoding’. This study investigates the form that the journalism of *The New York Times* takes when transcoded to the Web by evaluating multimedia news packages published on nytimes.com from 2000–2008. The number and sophistication of the multimedia packages grew over time to include new interfaces that incorporated elements native to digital environments such as hypertextual links, interactivity, elements borrowed from digital games and social media tools. Most packages were produced as sidebars to stories published in the newspaper, suggesting that multimedia was used as an extension of the written word, not as a primary storytelling format.

Keywords

games, hypertext, journalism, multimedia, new media, social media, transcoding

Introduction

Journalism has become a digital enterprise. News websites, mobile services and TV newscasts are produced and consumed in digital formats. Even the printed newspaper is the end product of a digital process. It is easy to underestimate the changes that digital media have brought to bear on journalism. While journalism was born in the era of print, and bears many of the values of print culture, the news now finds itself thrust into the

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realm of the digital, where it is increasingly likely to show characteristics associated with native digital formats such as hypertext, video games and social media. The simulations, interactive presentations and social networks that digital media make possible were never part of the original mission of print journalism.

McLuhan (1965) observed that the initial content of a new medium is an older medium, with innovation following later. In McLuhan's view, the initial content of online journalism would be repurposed directly from the printed newspaper or televised newscast. Many recent studies support his theory. Manovich (2001) took a more long-range view in his work on the evolution of new media. He developed the concept of 'transoding', which he defined as changes that result from translating an established cultural product (like print journalism) into a new technology (like the Web). Manovich viewed transcoding as 'the most substantial consequence of the computerization of media' (p. 45), noting that it was not a smooth or even a somewhat organized process like Hegelian synthesis but rather more like compositing two layers together, causing both layers and the overall composition to change over time.

This study investigates the form that journalism of *The New York Times* takes when it is transcoded to the Web by examining multimedia packages produced on nytimes.com from 2000–2008. *The New York Times* was chosen as a case study for this research because it is considered a paper of record whose coverage exceeds that of most newspapers. The website nytimes.com has won numerous awards for its multimedia work on the Web. This study is limited to multimedia journalism published on nytimes.com because multimedia packages embody content that cannot be exactly replicated in the newspaper and are more likely to bear the marks of transcoding than material repurposed directly from print. The year 2000 was the first year *The New York Times* began publishing stories categorized as 'multimedia' on the website nytimes.com.

Literature review

While research into multimedia journalism on the Web is relatively new, the consensus is that mainstream news organizations do not take full advantage of the multimedia story-telling capability of the Web. Online journalism is not 'driven' by multimedia: 'digital story-telling using multiple media can be seen as a potential but not a necessary element of added value to an online journalistic presentation' (Deuze, 2004: 141). News organizations tend to repurpose their 'offline' media from print or TV for publication on the Web (Deuze, 2003; MacGregor, 2003). Stories linked to the home pages of major news websites in the US and Europe reveal 'a lack of multi-media content' (Quandt, 2008: 735).

In several studies that comprise the 'long journalism' project, Barnhurst (2010) analyzed the evolution of print journalism over a 100-year period and discovered 'an ongoing re-definition of news as a cultural product' (p. 556). Barnhurst and Mutz (1997) found a transition from event-centered reporting at the end of the 19th century to journalist-centered reporting with an emphasis on news analysis at the end of the 20th: 'To qualify as news these days, an event must fit into a larger body of interpretations and themes' (p. 50). This transition to journalist-centered reporting 'provides the context for the move of newspapers onto the Web' (Barnhurst, 2002: 480).

A few studies of Web journalism address the subject of multimedia directly. By one estimate, audio slideshows are produced on half of all US newspaper websites (Bergland et al., 2008). Journalists in one survey said audio slideshows were powerful narrative tools that let individuals tell their own stories, but reported that news managers pressured them to produce video instead (Lillie, 2011). Ureta (2011: 196) developed a typology of links in Web-only features in an effort to define hypertextual structures on Spanish news sites. She found that 'sidebar' links, or links to elements outside of a story, greatly outnumbered 'embedded links', or links within a story (86.98% to 13.02%).

Nelson (1981: 0/2) is credited with coining the term hypertext, which he defined as 'non-sequential writing', although most scholars now see hypertext as incorporating multimedia as well as writing. Landow (2006) identified non- or multi-linearity (nonlinear or multiple narrative threads) and multi-vocality (multiple perspectives) as the defining characteristics of hypertext. Manovich (2001) described hypertextual stories as database narratives, consisting of fragments of information that could be re-grouped into new patterns. Goode (2009: 1296) suggests that news production and consumption are now structured like Manovich's database, 'an endlessly shifting agglomeration of data to be navigated, reconfigured, customized and "mined" in seemingly limitless permutation'.

In another area of research, scholars are beginning to discuss the impact of digital games on digital news. The field of game studies includes 'serious games', or game-like presentations that are used to harness the public's enjoyment of video games to 'serious' topics such as the news. Serious games are often simulations, aimed at reproducing real-world events (Egenfeldt-Nielsen et al., 2008). 'Games may enable 'process-oriented journalism', a storytelling technique that lets the audience explore the dimensions of a news story without a pre-defined narrative by a journalist (Diakopoulos, 2009). 'The use of game elements in nongame contexts', particularly serious games, has been dubbed 'gamification' (Deterding et al., 2011: 1).

The use of social media is another trend in digital journalism. Early 21st-century journalism increasingly embraces what Rosen (2006) calls the voices of 'the people formerly known as the audience'. Although Rosenberry (2005) found that news organizations did not take full advantage of the audience communication features of the Web, Singer (2006) found that online editors of major US newspapers saw audience participation rising at their institutions. Even when mainstream news organizations limit online audience participation, the public is able to share news stories widely and quickly through social networking sites like Facebook. Goode (2009: 1287) describes the public's ability to share or rate the news as 'metajournalism'.

Previous studies suggest that online journalism has the potential to incorporate new forms of expression that the Web makes possible, but news organizations have yet to fully embrace these features. This study builds on the research to date by looking closely at multimedia journalism produced by a single news organization. The goal of this work is to better understand the form that print journalism takes when 'transcoded' to the Web, and its trajectory over an eight-year period.

This study evaluates multimedia packages published on the website of *The New York Times* from 2000–2008. Each multimedia package underwent a content analysis of its format and news values. The analysis evaluated qualities that would help answer the following research questions.

RQ1: What are the narrative characteristics of the multimedia packages?

What storytelling intent is used in multimedia packages? Are the multimedia packages presented as objective reporting, analysis or some other form of journalistic storytelling? From whose perspective are multimedia stories told? To what extent do the packages rely on third-person narrative techniques of print news reports? Do the stories incorporate the perspectives of non-journalists or citizen journalists?

RQ2: To what extent, if any, are 'native' digital formats such as hypertextual links, elements of digital games or other kinds of interactivity present in the packages? Do these formats increase over time?

RQ3: To what extent, if any, are audience feedback mechanisms present in the multimedia packages?

Do multimedia packages contain e-mail links, social media tools or other forms of audience feedback and participation? Is there any evidence that the presence of these tools enable meaningful dialogue among nytimes.com readers or between readers and journalists?

RQ4: What is the relationship between online multimedia and material published in *The New York Times* newspaper?

Are the multimedia packages sidebars to print articles published in the newspaper, or Web-only features? Do the packages present new or additional information compared to the printed texts? Are some editorial sections of *The New York Times* represented more frequently in multimedia than others?

Methodology

This study looked at multimedia packages published on the website nytimes.com between January 1, 2000 and December 31, 2008. During this period, nytimes.com produced approximately 25,000 packages, and for this study 479 (1.9%) were evaluated.¹

For the purpose of this study, a 'multimedia package' is defined as a stand-alone unit of content classified as 'multimedia' by *The New York Times*, which may be retrieved from the nytimes.com multimedia search engine. Nytimes.com classifies any non-textual stand-alone presentation as 'multimedia'; therefore a video story is classified as multimedia, but a single photograph that accompanies a written story is not. The characteristic shared by all of these packages is that they could not appear as-is in the printed newspaper.

For material published between 2000 and 2008, *The New York Times* divides multimedia packages into four distinct categories: 'Video', 'Audio', 'Slide Show' and 'Interactive Features'. 'Video' refers to a single clip of video. 'Audio' refers to an audio-only presentation, although nytimes.com largely abandoned this category around 2004. 'Slide Show' is a simple sequence of photos, some with captions, navigated by pressing a 'next' button. Slide Show packages do not include audio. Photo slideshows with audio are classified as 'Interactive Features', a category of packages that incorporates multiple media and/or interactive interfaces in the presentation of the story.² (To avoid confusion, the nytimes.com category 'Slide Show' will henceforth be referred to as 'Photo Slideshow', meaning

photos only, without audio; and photo slideshows with audio, which are categorized as Interactive Features, will be referred to as audio slideshows.) Interactive Features represent the biggest departure from traditional news formats and include all multimedia packages that incorporate more than a single video presentation, a still photo slideshow or a single audio clip.

Two researchers coded the packages, with a 10.43 percent overlap ($n = 50$). The level of agreement averaged 93 percent, with reliability as measured by Krippendorff's Alpha averaging 0.8245.

Packages were selected at random from the *nytimes.com* multimedia search engine. To better understand the trajectory of the changes in the multimedia packages over time, 2 percent of the total packages from each year were selected for analysis. A researcher used the random integer set generator at *Random.org* to create a set of random numbers equal to 2 percent of the multimedia packages published during a given year. For example, there were 132 multimedia packages produced in 2000. The researcher requested 3 numbers from 1–132, as 3 is 2.2 percent of 132. The random integer set generator returned 20, 81 and 98. The packages corresponding to those places in the database were selected for the study.³

All of the packages were coded for narrative characteristics. To determine storytelling intent, packages were coded as either hard news (time-sensitive stories that are reported on immediately), feature stories (less time-sensitive reports that are often background information or human-interest stories), opinion (stories produced for the Opinion section that advocate a course of action or a point of view), analysis (stories where the reporter or an expert source provides insight to current events or trends), or 'other'. To determine storytelling perspective, packages were coded for either first-person perspective (where the narrator uses the pronouns 'I' or 'me', and incorporates first-person experience as part of the story), third-person perspective (where the facts of a story are reported by a seemingly neutral observer), no perspective (where the package had no narrative components, such as a series of audio clips from a CD), or a combination of first- and third-person perspective.

All packages were coded for hypertextual linking, elements borrowed from digital games and other kinds of 'interactivity'. Steensen (2011) and others have criticized the inconsistent use of the terms 'interactive' and 'hypertext' when describing online journalism. This is perhaps because these forms are still in the early stages of their development. In this study packages were coded for interactivity based on the format of the interface they were embedded within. The *nytimes.com* producers developed a series of interface templates that they used and re-used, with some variations. Manovich (2001: 69) defines human-computer interfaces as 'metaphors used to conceptualize computer data', metaphors often derived from other media like books, cinema or games. So, for example, a TV debate transcript that includes links between the text of the debate and the video is an 'interactive transcript', and a presentation where users may click on a timeline to get more information about events that took place during different periods is an 'interactive timeline'. To differentiate between 'hypertextual links' and 'interactivity' when discussing the qualities of these packages, this study will refer to those links and other user-controlled elements that exist within a package as part of the storytelling process as 'interactive'. 'Hypertextual links' will describe links to stories and elements that go outside of the narrative to related stories, what Ureta (2011: 196) would call 'sidebar' links.

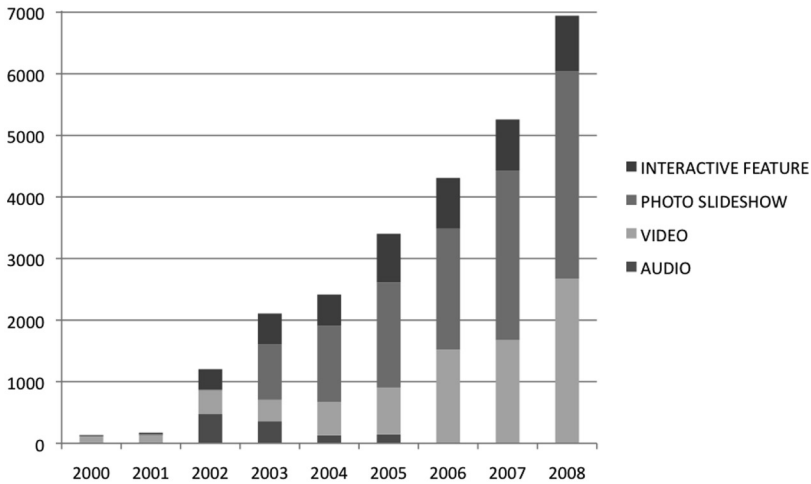


Figure 1. Total number of multimedia packages published on nytimes.com 2000–2008, based on results from the multimedia search option on nytimes.com.

All of the packages were coded for the presence of social media tools, such as e-mail links or links to ‘Share’ media on social networking sites.

Every package was coded to indicate whether or not there was a related story published in the newspaper. In many cases the packages did not have a direct link to the stories. However every effort was made to find a related textual story using multiple variations on the date of publication, title and subject matter in the nytimes.com search engine.

Findings

The results of this study are grouped into three sections: First, a few overall characteristics of the approximately 25,000 multimedia packages published on nytimes.com between 2000 and 2008; second, some overall characteristics of the 479 packages evaluated in this study; and third, analysis of the three main categories of multimedia packages in the study sample: Interactive Features, Photo Slideshows and Video. It is useful to consider each of these categories separately in the Findings because of their very different characteristics: the various formats of Interactive Features are least like print journalism; Photo Slideshows are most like the print format of the photo essay; and Video is most like broadcast journalism.

Overall characteristics of nytimes.com multimedia packages 2000–2008

In the first eight years of publishing multimedia packages on nytimes.com, the number of packages published each year increased, with the largest proportional increase occurring between 2001 and 2002 (see Figure 1).⁴ It is likely that the increase in 2002 was in part due to a large number of multimedia packages related to the events of September 11, 2001. A search for multimedia packages published on September 11, 2002, returns 51 results in the nytimes.com multimedia database.⁵

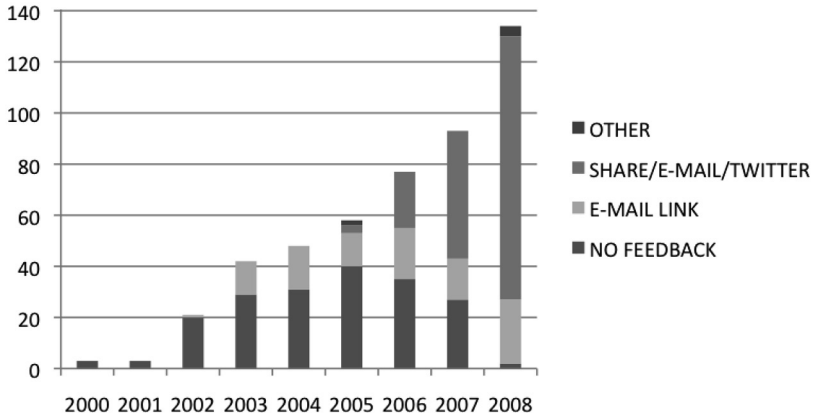


Figure 2. Audience feedback mechanisms associated with 479 multimedia packages in study sample.

The general format of the multimedia packages shifted over time as well. Video was the most common format from 2000 to 2001, while the Photo Slideshow format became the most common beginning in 2003.

Overall characteristics of 479 multimedia packages in study

In the study sample, multimedia packages were published in all editorial sections of nytimes.com. The sections with the greatest number were: Arts (10.9%, $n = 52$), New York Region (8.6%, $n = 41$), Sports (7.5%, $n = 36$), US (6.3%, $n = 30$), Travel (6.3%, $n = 30$), World (6.1%, $n = 29$), and Movies (5.2%, $n = 25$). In all, 75.2 percent ($n = 360$) of the multimedia packages were coded as ‘feature’ stories, even when they appeared in sections like Politics or when they addressed stories related to serious news events such as the Iraq War. The combination of softer, more feature-like multimedia packages linked to hard-news stories was a pattern that appeared frequently in the sample. For example, an Interactive Feature titled ‘Voices from the Polls’, consisting of several audio clips of voters who participated in the February 5, 2008 US presidential primary, accompanied a print story about the election results; a Photo Slideshow showing how Madison Square Garden was being transformed for the 2004 Republican National Convention accompanied several stories about the impact of the convention on New York City; and a Video titled ‘Life After Katrina: One Woman’s Story’ accompanied a more general article about Hurricane Katrina survivors still exiled from their homes.⁶

Audience feedback mechanisms increased over time on nytimes.com. Of the 479 packages evaluated in this study, 39.5 percent ($n = 189$) had no feedback mechanism; 21.9 percent ($n = 105$) had an e-mail link; and 37.6 percent ($n = 180$) had a series of links that took advantage of Goode’s ‘metajournalism’ tools to let users ‘Share, Twitter, E-Mail’ multimedia packages (see Figure 2).

The Share/E-mail/Twitter feedback option was introduced in 2007 in the newest Photo Slideshow and Video interfaces. Some of the older Video packages from 2005 and 2006 were retrofitted to the new interface.⁷ Only two packages in the sample study let nytimes.com

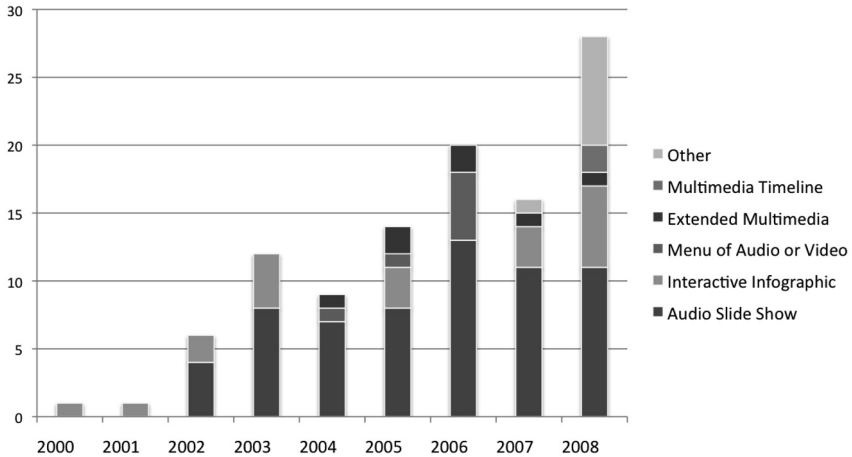


Figure 3. Number and type of Interactive Features in sample study by year.

readers leave comments directly on the same page with the multimedia package, and both of those packages were linked to stories that were published on nytimes.com blogs, not in the printed newspaper. Some nytimes.com home-page stories now have links to heavily moderated discussion boards, but this is a post-2008 development.

Characteristics of interactive features

Interactive Features are the most complex multimedia presentations published on nytimes.com. This category consists of any multimedia package that is not a single video presentation or a still photo slideshow, and represents formats that are at the farthest remove from the printed newspaper. Examples of Interactive Features include interactive infographics, audio slideshows and interactive timelines. Interactive Features made up 18.1 percent of the total multimedia packages published on nytimes.com from 2000 to 2008, and 22.3 percent ($n = 107$) of the packages in this study. In this category, the audio slideshow is the most common format, comprising 57.9 percent ($n = 62$) of the Interactive Features in the sample. Audio slideshows, which combine audio narration with still photography, the progression of which may be controlled by the user, are published on news websites around the world. The audio slideshow is arguably the most-recognized 'new' multimedia journalism form developed on the Web.

The number of new Interactive Feature formats published on nytimes.com increased significantly from 2000 to 2008 (see Figure 3). From 2000 to 2003, audio slideshows and interactive infographics were the only formats present in the sample, but beginning in 2004 new formats began to emerge, and in 2008 there were eight different formats in the sample group, including extended multimedia presentations that combined audio, video, graphics, text and animation; menu-driven presentations of multiple audio and video segments; interactive timelines; and other formats.

In 2007 and 2008, several new formats appeared for the first time. For example, 'Democratic Debate: Analyzing the Details' is an interactive transcript of a December 2007

debate among the Democratic US presidential candidates.⁸ The package includes video of the debate linked directly to a textual transcript so that readers may click on the text to see the video of that part of the text and click on the video to see the text of that part of the video. The transcript also uses a data visualization technique that color-codes the text of individual speakers so that readers can see when, and for how long, each of the candidates spoke. The combination of video, text, graphics and links between the elements makes this package one of the more sophisticated presentations in the sample, and, arguably, one of the more sophisticated presentations on any news website in the world at the time of publication. In a departure from Barnhurst's journalist-centered reporting, the voice of the journalist as interpreter or analyst is missing from this piece; instead, *nytimes.com* has provided its readers with the tools to make up their own minds. This approach is far removed from print reporting, and, given the analytical tools that readers may use to navigate the material, it is also very different from a textual transcript published in the newspaper. Indeed, the presentation is more like a game than a narrative, and could very well fit the definition of 'process-oriented journalism' (Diakopoulos, 2009).

The Interactive Feature 'Climbing Kilimanjaro' also has some game-like qualities.⁹ Its interface consists of an interactive map that has video, audio and textual information embedded within it. An animated map of the route to the top resembles the three-dimensional virtual worlds found in many video games, and the audio and video presentations that pop up at the end of animated sequences resemble 'cut scenes', or sequences in video games where the narrative is furthered by a linear video presentation that reveals important information about the game-story. The animation simulating the path the reporter followed to climb Kilimanjaro is a transformation of reality arguably at greater remove from the actual event than the verbatim transcript and video of 'Democratic Debate: Analyzing the Details', as the data used to recreate the path is not transparent to the audience.

An Interactive Feature titled 'The Weekly Health Quiz'¹⁰ borrows more directly from the realm of games by asking a series of questions, scoring each answer, and providing an evaluation at the end of the quiz. Readers may also share their results on social networking sites. The quiz does not test the audience's knowledge of good health practices; rather, it tests the audience's knowledge of health news stories recently covered by *The New York Times*. In that regard, the quiz seems more of a marketing gimmick than a serious piece of journalism. Indeed, the marketing department of *nytimes.com* is responsible for the content (Angelotti, 2008). While news quizzes have been published in newspapers for years, the mechanisms for interactive feedback, automatic scoring and the ability to share results via social networking are only available on the Web.

Interactive Features were more likely to include stories told from the first-person perspective than either Photo Slideshow or Video packages. In all, 44.8 percent ($n = 48$) of the Interactive Features featured first-person accounts by journalists or non-journalists, or both (see Figure 4).¹¹

Looking more closely at first-person stories told by non-journalists was informative because a pattern emerged where print stories reported in the third-person voice by *New York Times* journalists would be paired with stories of first-person experience narrated by non-journalist sources, presented in multimedia format. For example, in 2007 *New York Times* reporter Clifton Brown wrote a story about the conflict between the NFL (National Football League) and some of its former players over disability benefits. While the print

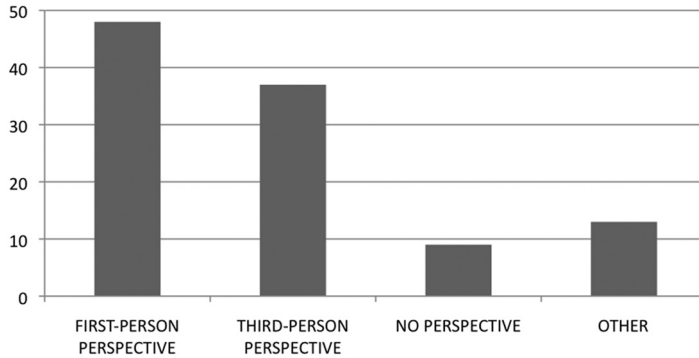


Figure 4. Number of interactive features with first- vs third-person perspective.

story contained some personal details about the players, it painted a picture of the conflict in pretty straightforward terms with facts and figures to back it up:

The issue of benefits for N.F.L. players will come to Capitol Hill on June 26, when Congress will hear testimony from a group of retired players who contend that benefits are insufficient, particularly for players who are disabled. [Former NFL player Brian] DeMarco painted a bleak picture of his situation Monday, with his cane wobbling as he walked and his wife holding his arm to steady him. Since his retirement in 2000, DeMarco said he had received about \$10,000 from the players union, yet his medication alone costs more than \$1,000 a month. By talking publicly, DeMarco said he hoped more players would avoid the nightmare he has lived after reaching his dream of playing in the N.F.L.¹²

On nytimes.com an audio slideshow titled ‘Life After Football’ accompanied the story, showing photos of retired football players as the players themselves described the injuries they sustained and how their injuries affected their lives. Former NFL player Conrad Dobler describes the violence of professional football:

For some reason, I had this reputation. They all wanted to get a piece of Conrad Dobler. A lot of people said well, you had the reputation of being the dirtiest guy in the NFL. If I was the dirtiest guy in the NFL, one would think, you know ... In order to go out there and lay a lick on someone in the NFL ... It’s a violent game. It is true pugilism out there. And to go to lay a violent hit on someone where you – you know I call it a snot bubbler, when you can hit someone hard enough that the little bubble of snot just comes out of his nose. You know, you gotta hurt yourself a little bit too.¹³

In another example, *New York Times* reporter Andrea Elliot profiles an Egyptian-born Muslim cleric who moves his family from Bay Ridge, Brooklyn, where working-class Muslim families were a common sight, to the wealthier suburb of Middletown, NJ, where Muslim culture is mostly invisible. Elliot’s print story illustrates the cultural differences between the imam and members of his new community:

Sheik Reda Shata pushed into Costco behind an empty cart. He wore a black leather jacket over his long, rustling robe, a pocket Koran tucked inside. The imam, a 38-year-old Egyptian, seemed

not to notice the stares from other shoppers. He was hunting for a bargain, and soon found it in the beverage aisle, where a 32-can pack of Coca-Cola sold for \$8.29. For Mr. Shata, this was a satisfying Islamic experience.¹⁴

In the audio slideshow Sheik Shata tells a much more personal story:

When I moved from New York City to Middletown, NJ, I experienced many new things. For the first time I can see golden stars shining in the sky after being blocked by the New York skyscrapers. And for the first time I can follow the moon from its birth until it becomes full. I wait with extreme desire for the moonlit nights so that I can play with my children on the front porch as I used to play with the boys in my village under the moonlight. And for the first time in my life, I can watch the rain falling on the trees. It is a great symphony that I never heard before.¹⁵

In these multimedia packages, the personal experiences of the narrators are not condensed to simple soundbites, as they might be in similar stories on TV news. The subjects are allowed to express themselves informally, in full sentences and paragraphs, to share personal anecdotes and perspectives in a manner that would not be so readily recorded in a work of print journalism.

Journalists also adopted first-person narration in several Interactive Features. Photographers, often silent about their contributions, narrated their personal feelings about taking photos of the September 11 attacks,¹⁶ or about fashion on the streets of New York.¹⁷ Critic Eric Asimov shared his appreciation of a selection of red wines,¹⁸ and Op-ed columnist Nicholas Kristof mugged for the camera as he tried to find Eastern Europeans who would be willing to go to Iraq in a segment titled 'Brother, Spare a Brigade?'¹⁹

The first-person narratives in the Interactive Features of nytimes.com represent a kind of reporting much different from what might appear in the newspaper. While print journalists might produce equally subjective accounts, the less space-constrained publishing platform of the Web may enable greater depth and length of reflexive expression. Even publications that specialize in human-interest stories tend to limit personal expression to the most salient soundbites. The power of these perspectives rendered in multimedia is unmistakable. The fact that many of these stories are accompanied by more traditional print reporting in *The New York Times* creates a satisfying balance between the facts of a situation as recorded by a reporter and the personal experiences of the people involved.

Characteristics of photo slideshows

Multimedia packages categorized as Photo Slideshows were the most numerous of all of the packages in this study (48% or $n = 230$). Photo Slideshows are arguably the multimedia format most comparable to a vehicle of print journalism: the photo essay. There are several benefits to publishing photo essays on the Web instead of in print: It is much cheaper to publish images online; the 'news hole' for images in print is quite limited when compared to the Web; and publishing more photos online does not increase the work burden of photojournalists, who usually take many more photos for each story than can appear in a printed newspaper. Indeed, based on a random selection of 21.5 percent ($n = 28$) of the 130 Photo Slideshows in the sample that had a companion story published in the newspaper, there were about twice as many photos published in Photo Slideshows on the Web as there were

published in the print edition of *The New York Times*. For the 28 stories that were sampled, there were 126 photos published in the newspaper compared to 248 photos published in Photo Slideshows on nytimes.com.²⁰

Over the eight-year period, Photo Slideshows published on nytimes.com have had two distinct interfaces: The first format, used between 2000 and 2006, consisted of a white background with a 'Next' button but without feedback mechanisms or links to related print stories. The second format, began in 2007, consists of a dark background with feedback options for readers to 'Share/E-mail/Twitter' the packages. The 2007 Photo Slideshow interface is more likely to include links to related stories. The change from the earlier interface to the current format shows an evolution towards increased use of hypertextual and social networking elements in Photo Slideshows on nytimes.com.

Characteristics of video

Video represents the second-largest group of multimedia packages published on nytimes.com. While video is the medium of broadcast journalism, newspaper journalists are less steeped in the tradition of the form that video takes in broadcast news, and the packages in this section show a much greater diversity of format than is typically seen on TV newscasts.

Of the 127 video packages in the sample, 29.1 percent ($n = 37$) were coded for first-person perspective, 18.8 percent ($n = 24$) were coded for third-person perspective, and 41.7 percent ($n = 53$) were rendered in what could be considered traditional broadcast formats of either an anchored presentation ($n = 19$) or a 'stand up' video package featuring a reporter ($n = 34$). Many of these more traditional broadcast formats were published on nytimes.com in 2007 and 2008, and included several segments that were featured on MSNBC.²¹

The average length of Video packages in this study was about four and a half minutes (or three and a half minutes, once the lengthier MSNBC-produced segments were eliminated from the sample), much longer than the average TV news segment.

Perhaps the most interesting characteristic of these video packages is the wide range of video storytelling approaches that were used. Along with anchored presentations by *New York Times* journalists,²² there are traditional broadcast news packages where a reporter narrates video footage on location, or as the 'voice of god' over video sequences;²³ extended interviews with sources that are like mini documentaries;²⁴ first-person stories told by non-journalists in their own words;²⁵ messy mashups of videos, photo and animation;²⁶ self-conscious first-person videos where *New York Times* reporters speak directly into the camera;²⁷ hand-held documentaries where the reporter's voice-over is replaced by text on screen;²⁸ video shot by non-journalists;²⁹ and video produced by MSNBC and re-published on nytimes.com.³⁰ The journalism of *The New York Times* is grounded in its print product, and its reporters, columnists and Web editors may feel they have more freedom to experiment with video storytelling formats than the staff of a TV news station would. Not all of the video stories of nytimes.com were successful, but there is an undeniable energy associated with them.

The standard Video package interface changed several times between 2000 and 2008, increasing hypertextual linking and social networking features with each iteration. For example, the first Video interface on nytimes.com was a stand-alone page for the video

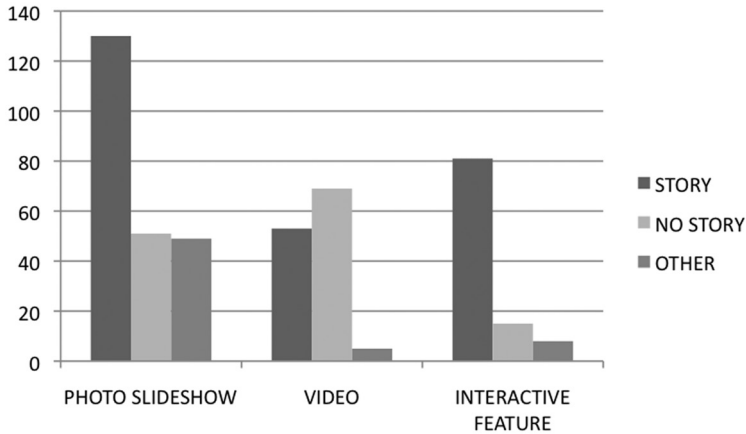


Figure 5. Number of multimedia packages in sample study with corresponding textual story^a
^a ‘Other’ describes packages for which the presence of stories could not easily be categorized, such as Photo Slideshows that referenced several stories or Video that documented a newsworthy event like a presidential speech.

presentation with links to high- or low-bandwidth files.³¹ In 2005 nytimes.com introduced an interface that included links to related stories and videos.³² The most recent interface for Video packages places the package within a ‘Video Library’ that lets readers ‘Share/E-Mail/Twitter’ the videos, and has links to most recent videos, most viewed videos, videos by editorial section such as Style or Politics, and links to ‘Other Videos You Might Like’.³³ What this video interface does not include are links to textual stories, if any, that accompany the video (although textual stories have related videos embedded within them).

Video packages were slightly more likely to be published as standalone entities on the Web, without a corresponding textual story (54.3%, $n = 69$), than to be published in conjunction with a written story (41.7%, $n = 53$). This is in sharp contrast to the Photo Slideshows and the Interactive Features, where the vast majority of packages were created to complement a written story (see Figure 5). The number of standalone videos on nytimes.com is surprising, considering that written text is the foundation of the organization’s journalism.

Discussion

During the first eight years that multimedia journalism was published on nytimes.com, the number and sophistication of multimedia packages increased. The following sections discuss the implications of these findings in relationship to each of the research questions.

Narrative characteristics of multimedia packages

Most of the multimedia packages in this study fall into the news category of ‘features’ rather than hard news or analysis, and many were produced as ‘soft’ companion pieces to stories that appeared in the print edition of *The New York Times*. This softer news angle was reflected in the number of first-person narratives. While 59.9 percent ($n = 287$) of

multimedia packages overall used third-person perspective, 44.8 percent ($n = 48$) of the Interactive Features, and 29.1 percent ($n = 37$) of the Video packages employed first-person narration by a journalist or non-journalist source as the storytelling perspective. These packages emphasize the feelings, perceptions and motivations of the individual who is telling his or her story. The subjective accounts are more extensive than print pull quotes or the soundbites of TV news, perhaps because of the much greater publishing capacity of the Web. The use of sound and moving images adds details that a printed newspaper cannot replicate.

Although the first-person narratives were carefully selected and edited by nytimes.com reporters, these stories give greater editorial voice to non-journalists (or journalists stepping out of the reportorial role). They seem to spring from the same impulse that drives citizen journalism and user-generated content. Barnhurst and Mutz (1997) found that the form of print journalism at the end of the 20th century required journalists to provide context and analysis in the news stories they published. In transcoding the cultural norms of print journalism to the digital format of the Web, perhaps the next phase includes incorporating subject-centered reporting in the form of first-person narratives rendered in multimedia.

Characteristics derived from hypertext, interactivity and digital games

The standard interfaces for Photo Slideshows and Video packages evolved over time to include more hypertextual linking and social media tools. The number of formats in the multimedia category Interactive Features grew from relatively simple interactive infographics and audio slideshows to include sophisticated interfaces that are far removed from the form of newspaper reports.

While there were elements of game-like qualities in some of the Interactive Features, the one package in the sample study that actually took the form of a game, 'The Weekly Health Quiz', seemed to have little significance as a work of journalism. Is 'The Weekly Health Quiz' an artifact of print-to-digital transcoding that failed as a work of journalism, or one that succeeded in expanding storytelling options available to journalists? Journalism shares the digital realm with native forms like video games, and it is quite likely that more game-like interactive multimedia presentations and simulations will increasingly find a place on news websites. More research into the consequences of process-oriented journalism and a detailed examination of game structures in digital journalism is needed.

Changes brought about by the transition from a printed news product to a digital one have the potential to raise questions about the guidelines for good journalistic practice. In the process of transcoding journalism to the Web, some multimedia formats are becoming standard repertoire on news websites, including photo slideshows, audio slideshows and interactive infographics. Increased sophistication in multimedia presentations underscores the need for journalists to understand data structures, as programming affects the presentation of content. This is especially important for the value of transparency in journalism. It can be much more challenging to disclose to the news audience the data underpinnings of databases or simulations than the facts that shape traditional news stories, particularly for journalists who are not used to presenting information this way. In this

sense, transcoding occurs not just between the form of the news and the new digital environment, but also impacts the mindset of journalists publishing on the Web.

Social media tools and user feedback

Between 2000 and 2008, nytimes.com increased its user feedback options, eventually adding tools to let the audience share Photo Slideshows and Video packages on social networking sites. Goode (2009) argues that such 'metajournalism' tools make it possible for the news audience to participate in the news agenda-setting process, as social media comments and news rating services enable readers to act as gatekeepers after the fact of publication. Whether sharing news stories with friends on Facebook inspires the audience to read the news more critically or become more engaged in the events of the day remains to be seen. However, social media provided an alternative space for the discussion of *New York Times* stories as nytimes.com provided almost no opportunities for readers to comment on news stories at the end of 2008. There was no evidence, in any of the packages in this study, that readers had any impact on the nytimes.com editorial product through audience feedback.

Multimedia's relationship to the newspaper

During the first eight years of multimedia publication on nytimes.com, most multimedia packages were developed as Web companions to articles published in the print edition of *The New York Times*, a finding that suggests multimedia content was still seen as an add-on to stories published in the newspaper. However, the incidence of multimedia-only journalism produced for nytimes.com was growing in some areas. First, Video packages were slightly more likely to be produced as standalone content on the Web. Secondly, 56.5 percent ($n = 130$) of Photo Slideshows were produced in conjunction with a newspaper story, but the online Photo Slideshows contained about twice as many photographs as the printed stories. Some 22.1 percent ($n = 51$) of Photo Slideshows had no corresponding print story and were produced exclusively for the Web.

The editors of nytimes.com also increased the sophistication of their standard Video package interface, embedding the videos within a video library. While this interface may increase the number of videos nytimes.com readers watch, it also divorces video content from written content published by the newspaper as links to related stories are not included in the Video Library. It remains to be seen whether video stories will continue to grow independently of written stories on nytimes.com.

Conclusion

The first eight years that *The New York Times* published multimedia journalism on its website nytimes.com showed evidence of evolution in the journalistic product as an end result of compositing the culture of print journalism with the layer of new media technology, or what Manovich calls 'transcoding'. The number and sophistication of multimedia packages published on nytimes.com grew during the eight-year period to include new forms of journalistic expression, such as audio slideshows and interactive infographics.

The journalistic storytelling in these packages reflects a willingness to experiment with editorial approaches that depart from the printed newspaper, including the use of data visualization techniques, hypertextual linking, elements borrowed from digital games and the integration of social media tools. While these new forms emerge on the digital end of the transcoding process, it remains to be seen to what extent, if any, the new digital formats may in turn reshape the printed news product.

Most of the multimedia packages were produced as add-ons, or related content to stories published in the print edition of *The New York Times*. Perhaps these add-ons represent a new shift in newspaper journalism, where the context and analysis that played a central role in 20th-century journalist-centered reporting is expanded to include, among other elements, source-centered reporting through the use of first-person narratives on the Web; interfaces that let the news audience explore the dimensions of a news story, such as an interactive transcript or an interactive map; tools that let the audience share stories with their friends or easily find related stories with a link. The written word is not the last word, but rather a jumping-off point for a cluster of material that encompasses the multiple facets of a news story.

Limitations of this study and suggestions for further research

While *The New York Times* is one of the most prolific news organizations working in multimedia journalism, it is only one organization and more studies need to be conducted to see whether the experience of nytimes.com is unique.

Further research needs to be conducted on specific new media formats that are emerging on news websites. Audio slideshows, which represent 57.9 percent ($n = 62$) of the Interactive Features in this study, are arguably the most-recognized 'new' multimedia journalism form developed on the Web. First-person perspective was used in 62.9 percent ($n = 39$) of the audio slideshows, and many of these first-person accounts were published to accompany printed stories where the perspective was in the more traditional third-person voice. The use of subjective first-person accounts in multimedia reporting overall needs further research. The wider news hole of digital publishing may encourage journalists to experiment with new kinds of news storytelling that are not feasible in print or television, but it is also likely that other factors, such as social media integration, are feeding a trend toward first-person expression in online news.

Video packages in this study exhibited a broad range of presentation techniques, well beyond the traditional anchored presentations or reporter 'standups' that are staples of TV news. More research is needed to determine whether journalists producing video for the Web have a greater range of formats to draw from, or if these non-standard Web video formats simply reflect a medium in its formative stage.

Although there was no evidence that social media tools empowered readers to influence nytimes.com editorial content, the use of social media links was in its infancy when these packages were published. More research is needed to see whether social media tools evolve to increase the influence of the audience in the gatekeeping process.

This study represents one attempt to investigate the evolution of journalistic expression in the digital realm, but many more studies are needed to further our understanding of how digital media technologies are reshaping the boundaries of journalism and news storytelling. These changes impact the practice and education of journalists, as well as the role of the press in everyday life.

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Notes

1. Initially 510 packages (2.04% of the total) were selected for evaluation, but between initial selection and final analysis, 31 of them were no longer available on nytimes.com.
2. Categories in the nytimes.com multimedia database can be fluid. In 2010, nytimes.com changed the classification of audio slideshows to 'Audio'.
3. For more information on the steps taken to collect the data, including the data files and coding instruments, see: <https://sites.google.com/a/temple.edu/the-evolution-of-multimedia-journalism-a-case-study-of-nytimes-com-2000-2008/>
4. There were some duplicate entries in nytimes.com's multimedia database. The overall numbers shown here should be considered estimates, although the relative growth of the number of multimedia packages from year to year is accurate.
5. Most of these were published on September 11, 2001, in a section called 'A Nation Challenged', which is a collection of 21 videos by *New York Times* photographers. See: http://www.nytimes.com/videopages/2002/09/11/nationchallenged/20020911_FACES1_VIDEO.html
6. See: 'Support Divided, Democrats Trade Victories' (accessed January 2011): <http://www.nytimes.com/2008/02/06/us/politics/06cnd-dems.html>; 'Readying Madison Square Garden' (accessed January 2011): http://www.nytimes.com/slideshow/2004/08/25/nyregion/20040826_GOP_SLIDESHOW_1.html; and 'Katrina Evacuees Are Frozen in Place' (accessed January 2011): <http://www.nytimes.com/2007/07/12/us/nationalspecial/12exile.html>
7. A New York Times spokesperson told Poynter Online that the option to share stories on Facebook had a 'positive impact' on traffic to the site, but did not cite specific statistics (Angelotti, 2008).
8. 'Democratic Debate: Analyzing the Details' (accessed January 2011): http://www.nytimes.com/interactive/2007/12/13/us/politics/20071213_DEBATE_GRAPHIC.html
9. 'Climbing Kilimanjaro' (accessed January 2011): http://www.nytimes.com/interactive/2007/10/26/magazine/20071028_KILIMANJARO_GRAPHIC.html
10. 'Weekly Health Quiz' (accessed January 2011): http://www.nytimes.com/interactive/2008/10/03/health/20081003_HEALTHQUIZ.html
11. The trend is common enough that *Poynter Online* industry watcher Steve Outig has commented on the use of first-person experience in several nytimes.com Interactive Features. See: 'A Source Narrates the Story at NYTimes.com', 8 March, 2005 (accessed January 2011): <http://www.poynter.org/column.asp?id=31&aid=79430>; 'When the Source Tells the Story', 10 May, 2005 (accessed January 2011): <http://www.poynter.org/column.asp?id=31&aid=82226>; 'Yes, It's First-Person Journalism', 3 August, 2005 (accessed January 2011): <http://www.poynter.org/column.asp?id=31&aid=86552>
12. 'A Battle Over Who's Helping Disabled Players Rages Anew', *The New York Times*, 12 June 2007, p. D1.
13. Transcribed from 'Life After Football' (accessed January 2011): http://www.nytimes.com/packages/khtml/2007/06/12/sports/20070612_NFL_FEATURE.html
14. 'A Cleric's Journey Leads to a Suburban Frontier', *The New York Times*, 28 Jan. 2007, p. A1.
15. Transcribed from 'Islam in the Suburbs', (accessed January 2011): http://www.nytimes.com/packages/khtml/2007/01/28/nyregion/20070128_IMAM_FEATURE.html
16. 'Photographer's Journal: A Wounded City', 4 February, 2002 (accessed January 2011): http://www.nytimes.com/packages/khtml/2002/02/04/nyregion/20020204_JOURNAL04.html
17. 'On the Street: Lanky' (accessed January 2011): <http://www.nytimes.com/interactive/2008/09/20/style/20080920-street/index.html>

18. 'Wines of the Times: Cornas' (accessed January 2011): http://www.nytimes.com/interactive/2007/09/12/dining/20070912_TASTING_FEATURE.html
19. 'Brother, Spare a Brigade?' (accessed January 2011): http://www.nytimes.com/packages/khtml/2004/12/11/opinion/20041211_BALTICS_FEATURE.html
20. The ProQuest Historical Newspapers and ProQuest Digital Microfilm databases were consulted to determine the number of photos published in the newspaper. For more information, please see <https://sites.google.com/a/temple.edu/the-evolution-of-multimedia-journalism-a-case-study-of-nytimes-com-2000-2008/>
21. In 2007, *The New York Times* and MSNBC formed a partnership to share content during the 2008 US presidential election. 'NBC, NY Times Politics Partnership', First Read on MSNBC.com, 30 July, 2007 (accessed January 2011): http://firstread.msnbc.msn.com/_news/2007/07/30/4429680-nbc-ny-times-politics-partnership
22. For example, 'Page One: April 16, 2003' (accessed January 2011): http://www.nytimes.com/videopages/2003/04/15/multimedia/20030415_PAGEONE_VIDEO.html
23. For example, 'Darfur Peace Conference' (accessed January 2011): <http://video.nytimes.com/video/2007/10/30/world/1194817121740/darfur-peace-conference.html>
24. For example, 'A Conversation with William Wegman' (accessed January 2011): <http://video.nytimes.com/video/2006/03/09/arts/1194817099289/a-conversation-with-william-wegman.html>
25. See 'Vows: Kristin and John' (accessed January 2011): <http://video.nytimes.com/video/2006/08/18/fashion/1194817091931/vows-kristin-and-john.html>
26. For example, 'Political Points' (accessed January 2011): http://www.nytimes.com/videopages/2004/04/10/multimedia/20040410_POINTS_VIDEO1.html
27. For example, 'Was Alan Greenspan Just Lucky' (accessed January 2011): <http://video.nytimes.com/video/2007/10/24/opinion/1194817116202/was-alan-greenspan-just-lucky.html>
28. For example, 'Life After Katrina: One Woman's Story' (accessed January 2011): <http://www.nytimes.com/2007/07/12/us/nationalspecial/12exile.html>.
29. For example, 'Taste of June' (accessed January 2011): <http://www.nytimes.com/2007/09/13/movies/13ghet.html>
30. For example, 'Barack Obama with Brian Williams' (accessed January 2011): <http://video.nytimes.com/video/2008/01/09/us/politics/1194817094864/barack-obama-with-brian-williams.html>
31. For example, 'Commentary: What Day Is It' (accessed January 2011): <http://www.nytimes.com/videopages/2002/06/12/opinion/20020612friedman-62.html>
32. For example, 'Movie Minutes: "Crash"' (accessed January 2011): http://www.nytimes.com/video/html/2005/05/05/movies/highbandwidth/windowsmedia/20050506_mm_CRASH_VIDEO.html. Video files from this format were no longer available as of June 2010.
33. For example, 'Grilled Lamb and Figs' (accessed January 2011): <http://video.nytimes.com/video/2008/07/15/dining/1194817116945/grilled-lamb-and-figs.html>

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