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2005

## Genres of digital documents: Introduction to the special issue.

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# Introduction to the special issue

## Genres of digital documents

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### **Abstract**

**Purpose** – To introduce the special issue on “Genres of digital documents.” While there are many definitions of genre, most include consideration of the intended communicative purpose, form and sometimes expected content of a document. Most also include the notion of social acceptance, that a document is of a particular genre to the extent that it is recognized as such within a given discourse community.

**Design/methodology/approach** – The article reviews the notion of document genre and its applicability to studies of digital documents and introduces the four articles in the special issue.

**Findings** – Genre can be studied based on intrinsic genre attributes or on the extrinsic function that genre fulfills in human activities. Studies on intrinsic attributes include classifications of genres as clusters of attributes, though these classifications can be problematic because documents can be used in flexible ways. Also, new information technologies have enabled the appearance of novel genres. Studies on extrinsic function include ways to use genre for education or information accesses, as well as the use of genre as a lens for understanding communications in organizations. The four articles in the special issue illustrate these approaches.

**Originality/value** – The paper provides a framework that organizes the range of research about genres of digital documents that should be helpful to those reading this research or planning their own studies.

**Keywords**- Digital libraries, Research, Digital storage, Classification

**Paper type**- General review

### **Introduction**

The study of genres – the fusion of content, purpose and form of communicative actions – stretches back hundreds of years to the beginnings of self-reflective human communication. Greek philosophers and orators recognized that the content of the message is not always its most important aspect; rather, the delivery, the context, and the rhetorical structure all play complementary roles in the subtle but profound act of one human being transferring information to another and thereby creating meaning from that transfer. As well, we have long had an awareness that the concept of genre is not only critical to communication, but, indeed, worthy of study in its own right. Because a “genre” is not any one thing, but rather an intersection of several phenomena in a context of use, its study has spanned many disciplines and areas of praxis, from the arts to metadata schemes.

In this special issue of Information Technology & People we present four papers that address fundamental questions about genre, and that extend the study of genres to the environment of the World Wide Web. As researchers at this point in history, we have the luxury of observing the transition of forms and traditions of communication from the start of the electronic era to its present tumultuous and lively development and on to an expected future stabilization. Most of us are not only familiar with life before the web, but have by now experienced some of the transitions in use first-hand and have had an opportunity to reflect on them. Yet, amidst the tumult, we are often incapable of capturing it all, or making good sense of it. For this reason it is all the more important that the authors of the papers in this issue bring to the growing body of research on genre a viewpoint that may no longer be possible in another ten years. That is, in the near future, we may no longer be able to remember what it was like to participate in organizational life without e-mail, or in a consumer purchase transaction that is not supported at least in part by a web site presence.

### **Definitions of genre**

One of the challenges of studying genre in general is that there never has been, nor is there presently, a consensus on what a genre is, what qualifies for genre status, how genres “work,” how we work with genres, how genres work with each other, or how best to identify, construe, or study genres. Genres are a way people refer to communicative acts that is understood by them, more or less, but which is often difficult to describe in its particulars. Thus, genres are recognized and used, but not so readily described and defined. As a result, definitions of genre vary depending

on the tradition from within which a researcher is working. Some researchers take genres and their attributes as a given and build from there, while others aim to discover them in the communicative activities of people engaged in a variety of endeavors. As a result, you will find that many genre researchers must choose a definition of genre useful to the investigation at hand as one of the first steps of the research process. Such a multiplicity of definitions is not necessarily sloppiness or lack of rigor, but rather an indication of the richness of this concept, and its fruitfulness as a lens through which to observe a diversity of phenomena, from business practices to artistic works.

In general though, we note that most definitions include some consideration of the form of a document and sometimes of expected content. Most also include the notion of intended communicative purpose. Finally, most include the notion of social acceptance; that is, a document is of a particular genre to the extent that it is recognized as such within a given discourse community. In fact, successful membership in any number of social contexts requires a fluency in the genres in use in that context.

### **Intrinsic versus extrinsic features of genre**

Given a definition of document genre as including both socially recognized form and purpose, in studying document genres it is necessary to look at the context of use as well as the formal technical details of the documents. Nevertheless, it is possible to make a logical division between intrinsic genre attributes and the extrinsic function that genre fulfills in human activities. The relative emphasis on form versus function also depends on the domain from which the genre emerges. For instance, musical genres emphasize the form and structure first (as in a sonata) while the way the sonata functions aesthetically “in the world” is generally given secondary attention in a discussion of the sonata genre. This does not mean that the two aspects are mutually exclusive, but that one aspect can take precedence. In organizational settings, we might focus on the formal attributes of an e-mail message, or we might instead consider how the message functions in the discourse between sender and receiver, and indeed emerges from it, thereby giving that aspect the greater emphasis.

The focus on the nature of the document genres themselves, or conversely the focus on what the document genres reveal about something else, such as human social activity, are two directions present in much of contemporary genre studies and in the papers in this special issue. Many researchers investigate both the intrinsic attributes and the situated implementation of genres, following from the assumption that these are inseparable. Other researchers assume that intrinsic attributes are relative, in the sense that genres are created from communicative action, and not the other way around. Genres, from this perspective, assume consensual attributes over time as a result of well-trodden paths of use. Yet other researchers do not concern themselves with a comprehensive understanding of either intrinsic or extrinsic genre attributes but focus rather on any attributes that will allow them to exploit genre for knowledge-representation functions, such as cataloging, information representation and retrieval, or natural language processing. In the following sections, we will briefly review these directions.

### **Intrinsic attributes of genres**

#### **Genres as clusters of attributes**

The notion of a genre having an intrinsic set of attributes is very old, stemming from the Aristotelian principle that to correctly classify and thereby understand any phenomenon, one must first identify its essential qualities – those attributes that best associate one entity with similar entities and most clearly differentiate it from others. This species/differentia approach to classification produces a representation that has at its core the generic relationship, colloquially known as the “is-a” relationship. According to this perspective, in order to build a comprehensive and true taxonomy of letters (that is, to understand what makes a letter a letter, and what makes a love letter different from a business letter), we must understand the salient attributes of content and form.

From studying non-digital genres we know that the role of content and form inform each other. For example, if we are presented with only the empty framework of the format of a letter (heading, salutation, body, and closing) most people can identify the genre. Similarly, if we are presented with the content without the form – just the text – we can still recognize it as a letter (Toms et al., 1999). For some genres, the content is more important, but for some the form is equally so. Thus the film noir genre is defined by a mood, and perhaps certain cinematographic techniques, and some stereotypical themes. If asked to define a film of this genre, a film student may be able to do so, but many of us, while recognizing the genre, could not specify exactly what those attributes might be. We know that the content alone is not sufficient to make it film noir, since similar content treated differently would produce an entirely

different type of film. Other genres have more normative and more easily defined specifications that can indeed be articulated: haiku poetry, science fiction, or scholarly articles.

In studying digital genres we rely not only on traditional indicators of a genre, such as specific content and form, but also new and different cues for both identifying and then analyzing and making sense of them. Above all, we recognize that any approach to attribute analysis must deal with the problem of a genre's intrinsic multifaceted nature, that is, the cues that not only identify the genre as an artifact, but also as a medium for participation in a communicative act (Kwasnik and Crowston, 2004).

### **The fluid nature of genre**

What has changed since Aristotelian times, though, is that today we recognize that an exhaustive identification of attributes, even if that were possible, may not be sufficient for a full understanding of a document's genre. This is because we have come to understand the power and primacy of the document's actual implementation in a life situation in addition to its content and technical attributes. As an extreme example we offer the instance from our own experience of a colleague's funeral service at which the family asked the puzzled minister to use a recipe for chocolate biscotti as one of the readings. The funeral reading is an easily recognized genre, as is a recipe, and one would not normally confuse the two or expect them to be interchangeable. However, because our deceased colleague was passionate about cooking and eating good food, the recipe, read in the context of his funeral, became a metaphor and a tribute and held many layers of meaning for his closest friends. The recipe genre and the funeral-service reading genre fused in a touching and warmly humorous way. In this modern approach, then, a business letter could be construed as a love letter, given a sufficiently stretched genre-use situation.

### **Genres and technology**

In the realm of print documents, genres have evolved over the millennia, often slowly and gradually, occasionally suddenly, and while there may be lively discussion about when, say, a novella becomes a novel, genres in general have been relatively stable. A play remains an essentially recognizable genre despite genre-bending endeavors at various points in the history of drama. We can still easily identify the prototypical limerick, the tempo of a rousing march, or an office memo.

As documents have migrated to the web, however, their identity as genres has also evolved. New document genres have emerged (Crowston and Williams, 2000; Dillon and Gushrowski, 2000), while older ones have blended, changed, and been incorporated into different social endeavors. Print-document genres adapted to the web, and new electronic genres emerging frequently, appear to be shuffled, disassembled and then put together again, in a seemingly chaotic manner. Many researchers, and indeed the public at large, assume that there are significant and fundamental differences in how these adapted and new genres will now function and be used. As with many new technologies, there are fond hopes that these genres will be socially transformative, enabling better communication, as well as more flexibility and expressiveness. Thus some researchers have focused on the transition from one form to another, on new communities of discourse, and on the issues of this transformation.

Emerging from these discussions is the broader question of whether technology leads human activities or follows it. In terms of genres of digital documents, the questions that arise are whether digital genres emerge from what people do on the web, or whether the technology itself affords ways of doing things that people can then discover and exploit. This is by no means an easy question to answer, since people have always found ways to repurpose technologies, and digital technologies are no different. What is even more difficult in the electronic environment is that many technologies are converging – voice, image, text, databases, computing – creating opportunities for combining and recombining genres of many different kinds in inventive ways and for unexpected purposes.

So, a discussion of genre is challenging for a number of reasons – among them the differences in the concept's role in various domains and the contextual nature of genre in action. Still, we find genre a useful concept because in identifying and labeling genres we try to capture the gestalt of the various components of the communicative act. This is all the more important for digital genres on the web, since so many socially agreed-upon cues present in traditional print documents and oral communication are no longer available to us.

Despite these difficulties, we have a continuing and, indeed, growing need for understanding a document's genre. This is because genres provide an efficient way of dealing with documents at all stages of a document's lifecycle – from creation to dissemination to storage and retrieval and to utilization for new and creative purposes. In a vast landscape of communicative choices and strategies, genres provide a shortcut by which people can identify and participate in social endeavors. Knowing a document's genre, and therefore its communicative utility, helps a person formulate a precise query, for instance, or recognize the relevance of a document that is presented as the result of processing that query.

### **Genres in action**

While the concept of genre generates lively debate in terms of what it is and how best to study it, there is one aspect that is agreed upon by virtually every researcher, and this is genre's fundamentally social role – more specifically its communicative role. We can say that genre emerges from social activity (Miller, 1984), and it, in turn shapes social activity by providing templates, frameworks, and socially agreed upon constraints for communicating. How this knowledge of genre is then implemented or exploited is, in fact, as varied as the situations in which it is embedded.

### **Rhetorical and education function of genres**

Among the earliest uses of genre was as a golden standard for excellence in communication, and especially in argumentation. Thus the formation of ideas into tried-and-true genres ensured that the mind would be drawn in the appropriate direction, much as various artistic devices such as color and perspective draw the eye in one direction or another. The purpose, then, of learning how to produce a given genre, was to learn how to “do it right.” Today, we see the notion of teaching through genres rather than about genres for the purpose of educating children (Chapman, 1999) and socializing neophytes into a given profession. Law students spend their first year learning how to write briefs; young doctors learn how to write a discharge summary; scholars learn how a research paper is structured and produced. These forms are both practical and symbolic in that they enable efficient communication, but also demonstrate the practitioner's capabilities and credentials for membership in a given community of practitioners.

### **Use of genres for information-based tasks**

Knowledge of the genre of the document and its content/structure characteristics can be exploited in a number of tasks because genre provides some fixity to otherwise infinitely variable texts (Yates and Sumner, 1997). Genre acts as a template of attributes that are regular and can be systematically identified. For instance, Liddy (1991) was able to identify the main components of an abstract for papers reporting on empirical research by looking at the recurring patterns of linguistic clues such as terms, tense, syntax, and position in the abstract. She was able to do this because abstracts for such types of articles are a relatively stable genre. When she tried the same technique for abstracts for non-empirical research papers, such as case studies, essays, or reviews, she was not as successful because the structure, terminology and syntax of these abstracts was no longer as predictable. Researchers have studied the genre structure of many types of digital documents, in all cases making use of the fact that over time, a genre acquires a certain pattern of attributes: locutions, form, structure, length, vocabulary, and so on.

Many recent attempts aim at discovering these attributes automatically, rather than identifying them first and then utilizing them in various tasks (Bagdanov and Worring, 2001; Karjalainen et al., 2000; Karlgren and Cutting, 1994; Kessler et al., 1997). This line of research assumes that genre attributes may be too unwieldy and slippery to identify “from the top,” and that there may be too many genres in a rapidly growing and expanding field of digital documents and their implementations (Dillon and Gushrowski, 2000; Kennedy and Shepherd, 2005; Kwasnik and Crowston, 2004; Watters and Shepherd, 1999).

### **Genres as a reflection of practice**

Finally, rather than studying genres themselves, researcher can instead study human activity through genres, especially those activities that focus on communication (Swales, 1990). This is, obviously, not new. We have studied diaries and letters for many hundreds of years for what they reveal about their writers and the times they lived in. Others have looked at epitaphs, songs, and political slogans. These texts are useful because they can be studied not only at the level of what they say, literally, but what they convey at many other levels. Genres are consensually created and thus they capture not only the meanings of the individual, but also the meanings of the

community in which that text is used.

As a result, genre provides an excellent lens for discourse analysis – that is the analysis of language in use in a given community. This type of analysis strives to understand not only the words, per se, but the contexts in which those words acquire meaning. So, for instance, a discourse-based study of rap-music lyrics reveals the culture in which they are created, as well as the values held by the artists and fans. The rap-music genre captures this culture and reveals it simultaneously.

### **Genre ecologies**

What clearly emerges from observing the use of genres in any given domain, then, is that genres do not exist in a vacuum. One way of articulating this is the notion of genre ecologies (Erickson, 2000). While Erickson uses the notion of ecology in a particular way in his work, we extend his apt metaphor because it captures succinctly how, like any organism in an ecological community, genres have effects on each other and depend on each other for their effectiveness. They evolve over time, some slowly, some more rapidly. Some genres, under the right conditions, can supplant others. Genres exist in habitats or communities of practice.

The notion of genre ecologies becomes all the more salient for digital environments as we observe two phenomena occurring more or less simultaneously: the migration of traditional genres to the web, and the emergence of new genres unique to the web. These genres merge or divide, transform and evolve. The study of the issues ensuing from these processes is fascinating and revelatory. It can be viewed globally – as in the study of scholarly communication on the web, for instance, or more specifically – as in the study of e-journals.

### **Genre repertoires and subgenres**

Learning to produce a given genre more or less correctly is sometimes not sufficient. Since document genres often exist in interdependent genre systems (Bazerman, 1995), such as the documents necessary for submitting a paper to a conference, one must understand not only how to produce each of the components of the genre system, but also how and when to invoke them in the overall process. This involves a knowledge of their interdependence (Orlikowski and Yates, 1994).

As well, genres may overlap, where a document of one genre includes components representing other subgenres (Orlikowski and Yates, 1994). For instance, we are all familiar with the organizational newsletter, which might include announcements (one genre), letters (another genre), and captioned photographs (yet another genre). What is different in the case of electronic documents is that these clusters can now be assembled on the fly, and with only minimal differences in cost. In addition, their physical and temporal order can be confusing unless they are explicitly linked in a prescribed sequence.

### **Identifying and studying genres**

Genres are difficult to study under any circumstance because they are so complex; they integrate many different facets into an identifiable but intricate whole. In the non-digital world, genres are relatively more fixed, and thus we can at least attempt to learn their attributes, forms and implementations. For digital documents, however, this task is even more complicated because we no longer have access to easy genre clues. For instance, in the print world we differentiate between a publication with glossy paper and photographs, and one with plain paper, simple design, and the absence of formatting gimmicks. We often use these cues to say, “This is a more scholarly publication,” or “This is commercial.” Now, on the web, these same cues may or may not signify the same thing or they may signify something else, such as, for example, the amateurish or professional skills of the page authors.

Furthermore, the boundaries of genres are not at all easy to specify. Most of us know, at some level, that a typical research paper has many subgenres in it: an abstract, acknowledgements, citations, graphs and tables, and so on, and as neophytes we may need to learn how to produce each of them individually. As we become more seasoned over time, however, and through consensus of the scholarly communities in which we participate, these individual subgenres are merged into an identifiable whole, and we no longer need to pay attention to the subgenres. As a result, the concept of a research paper is fairly stable and gelled, and we know where its boundaries are. In a similar publication on the web, these boundaries become less clear. We can now incorporate links to completely other

documents, vary the order of the text flexibly and at will, and change the document frequently by updates. This makes the clear definition and bracketing of documents problematic (Yates and Sumner, 1997) and by extension the identification of genres and genre attributes problematic as well.

For all these reasons, studying the genres of digital documents – identifying them, seeing how they are used and formed, understanding their role in work and other human endeavors, and exploiting them for analysis and other information-based tasks – is a formidable undertaking. Most researchers in this area, however, and those represented in this issue are no exception, find genre to be a promising instrument for capturing the complexity of human communicative acts, and the artifacts this communication produces.

### **The four contributions to this issue**

In the following sections we present a brief overview of the contributions to this special issue, with a particular emphasis on how these studies advance our knowledge of the genres of digital documents and address some of the issues in studying them. The issue opens with a paper that discusses genre theory, followed by two that present analyses of adapted and novel genres, namely newspapers and weblogs. The issue concludes with an example of an organizational analysis using genres as an analytic lens.

#### **“Temporal coordination through communication: using genres in a virtual start-up organization” by Hyung-Gyung Im, JoAnne Yates and Wanda Orlikowski**

In this paper, the authors address one of the issues of fixity of digital genres – namely that the temporal and geographic flexibility of communication using digital documents introduces additional challenges of coordination. People working on teams in a distributed environment are thus required to create adaptive genres by which to “structure their activities across time and space.” The study is grounded in the approach that genres, digital or not, emerge from work practices and in turn shape those work practices. “Using Giddens’ (1984) structuralist perspective, we can see that actors communicate in order to temporally structure their daily work practices, but, at the same time, their communication is in turn, guided and structured by their ongoing work and temporal practices.” Studying the genres in a digital environment layers on some additional considerations, namely, the creation of contextual and temporal cues that may be managed differently than in a co-located situation, and thus it is the aim of this study to reveal and describe these strategies.

One of the interesting aspects of the authors’ discussion is their focus on the enabling aspects of digital technology, rather than on the limitations or constraining aspects. Because of this perspective they are able to describe how distributed teams cope with the temporal coordination of their work by means of various strategies using such genres as status reports, bug/error notifications and update notifications, and genres systems, such as phone-meeting management.

From a methodological point of view, the study makes a contribution in its innovative method of identifying genres. This is, as we know, a persistent and rather intractable problem. In studying a self-managing team the authors did not look at genre use as imposed by someone else, but rather as the genres emerged naturally. In analyzing an archive of communications, they constructed genre definitions inductively on the basis of the frequencies of various coding categories as well as by noting previously identified common paper-based and electronic genres. This interesting approach ensures conceptual coverage while avoiding the bias of stretching traditional forms too thinly to cover emerging ones.

Because genre encapsulates purpose and form, the authors make a strong argument for the use of genre as an analytical tool, that is, its usefulness for investigating interesting behavioral phenomena through the genre lens. They describe how genres are created and how they are then instantiated in a complex but adaptive pattern of interrelated and interdependent communicative acts. The study also underlines how the relationship between genre creation and use is recursive. “As organizing structures, genres shape beliefs and actions, and in doing so enable and constrain how organizational members engage in communication.”

## **“Digital genres: a challenge to traditional genre theory” By Inger Askehave and Anne Ellerup Nielsen**

By traditional genre theory the authors of this paper mean the framework proposed by Swales (1990) in which genres are understood to be above all directed and purposive, that is, genres are produced towards some end, and thus can be used to “investigate the relationship between discourse and social practice and to teach genre conventions to students of language and communication.” By taking a linguistic and communicative perspective on the use and production of genres, the authors naturally focus on what “triggers a particular text structure and – more often than not – a host of conventionalized verbal and visual rhetorical strategies.” Three fundamental components emerge: the communicative purpose, the move structure, and the rhetorical strategies.

Following from this is the notion that genres are, therefore, not construed or used all at once, but must be “read,” choosing from what is often a common “move repertoire.” When genres migrate to the web, however, a new dimension is brought to bear, namely that of navigation. The main goal of this paper, then, is to show how the use of web-mediated documents is fundamentally different from their use in the print environment because on the web we must cope in a different way with navigation as well as the reading of content. Put another way, the web introduces a new aspect to the model, namely that of the digital medium.

While the medium of any document has always been understood to be important, the medium with respect to the web is critical for a person’s participation in any given genre because it touches upon not only the content of the document but also on how that document is accessed. This includes the fact that we can now, as a matter of course, “enter” a text midstream and read it non-sequentially. To account for the different environment on the web and as an extension of the Swales model, the authors introduce Finneman’s (2001) notion of the modal shifts of reading and navigating. Thus, one important contribution of this paper is to bring attention to “the roles of both text producer and text receiver.”

The implications of the two-dimensional model introduced here is that digital genre cannot be analyzed as a static product but rather should be studied for both its genre and media characteristics. Further implications suggest that perhaps any genre, digital or not, should be viewed with at least an understanding of the mediating function of the medium in which it is enacted.

## **“Weblogs as a bridging genre” by Susan C. Herring, Lois Ann Scheidt, Elijah Wright and Sabrina Bonus**

The authors present an “empirical snapshot” of weblogs (or blogs), and in doing so address some of the challenges of describing the artifacts that emerge from the process of reproducing, migrating, adapting, and creating new genres on the web. They chose the weblog, as an example of a rapidly growing and popular genre because many claims have been made for such digital genres, including the claim that they are fundamentally unique and different from what has come before, and that, because of their particular digital attributes they have the potential to be socially transformative. Weblogs are seen as a fusion of not only the purposes to which they are put, but also of the technological affordances that are available to produce them.

This study approaches the study of genres from both the functional and the descriptive perspectives and attempts to draw inferences about how weblogs function by conducting a systematic analysis of their empirical attributes. An interesting aspect of this study is that the authors view weblogs as part of an ecology, and by describing them, attempt to position blogs with respect to their other sister genres.

In conducting their study, the authors show that in studying web-based documents, one of the challenges is building the appropriate analytical framework from which to view the phenomenon. In addition to the traditional dimensions used in conducting content analysis of communication events, the authors also had to take into consideration the specific requirements and exigencies of a rapidly changing and medium-specific set of texts in a digital environment. First of all they had to start by defining and bracketing the phenomenon itself. Thus, one of the contributions of this paper, from a methodological point of view, is the extreme care in the reporting of working definitions, sampling, and the description of the scope and boundaries of the texts being studied. Second, the authors had to adapt measures of interactivity, author demographics, content, purpose and many other complex attributes to this environment. Then, they had to develop and incorporate an analysis of structural, as well as content features, because it is in at this intersection of form and content that the power of genre analysis is most evident. Finally, they conducted a comparison of blogs with other genres with which they are often compared. This multidimensional



approach yields a picture of one genre in the context of other genres from which it is derived or to which it is related.

The results of their analysis suggest that “the blog is neither fundamentally new nor unique, but that it . . . occupies a new position in the Internet genre ecology. Specifically it forms a de facto bridge between multimedia HTML documents and text-based computer-mediated communication . . . .” This finding emphasizes the necessity, in describing digital genres, of not only profiling them but also of situating them in a broader field of related genres from which they may borrow and with which they may merge. It also underlines the fact that digital genres evolve, and may go through hybrid stages before solidifying into a truly stable form. Furthermore, the results suggest that blogs are not always, and even not often, interactive filters and forums for social change (as some would depict them) but rather, they are more typically personal and introspective.

This study demonstrates very clearly how a systematic analysis can lend support to, or conversely, question commonly held assumptions of what actually goes on the web. By studying the phenomenon of information sharing through blogs, the authors have shown that while certain genres might have the capability and potential for particular implementations and outcomes, they don’t necessarily instantiate those outcomes in practice. This is the gap between what “could be” and what actually happens – one of the conundrums of technological applications in general – and in this paper well demonstrated through the use of genre analysis of one such application.

#### **“Online newspapers in Scandinavia: a longitudinal study of genre change and interdependency” by Carina Ahlstrom and Ola Henfridsson**

This paper is illustrative of the way in which genres, both digital and print, are members of genre ecologies in the sense that they evolve and exhibit interdependence. In order to better study the changes over time, the authors conducted a longitudinal view of one such “reproduced” genre, the online newspaper. Rather than a snapshot of the genre at one point in time, they instead opted for a series of observations from 1996 to 2002. This historical perspective allowed them to describe many changes at a finer level of granularity than a single view would afford.

While many studies focus on the user’s perspective (how people interact with a given genre), this one looks at the evolution of the genre from the producer’s or institutional perspective. From such an interesting perspective we have the opportunity to understand not only the artifacts, that is, the newspapers themselves, but also the motivation behind the various transformations over time. As well, the study is designed to draw on a number of streams of data: the newspaper attributes of form, content, design, and functionality, but also the perceptions of the people involved in producing the newspapers. This unique view allows us to see the intimate relationships and dependencies of the various aspects at “the level of everyday newspaper work and production.” In other words, we gain insight into the more global social, economic and technological factors affecting the phenomena of news production and consumption.

The study yielded both a finely detailed analysis of these papers, but also a fascinating overview of what happens over time – how the online version is at first dependent on the print version for content, but how over time the reverse can be true. That is, the paper version now depends on the online version for material that can only be produced through the functionality afforded on the web. As the relationship of the two forms evolves, each, indeed, strengthens its own identity as a genre, but at the same time, at an institutional and practical level, the print and digital versions continue to develop mutually, rather than completely independently.

The implications for studying digital genres are obvious. It is not enough to describe, for instance, what a newspaper was like “before” and “after” it was replicated on the web. What is possibly more important is to observe the reciprocal developments, the surges that occur as a result of technological advances or economic exigencies, but then also the plateaus and periods of consolidation. Finally, this paper demonstrates beyond a doubt that the development and enactment of genres is fundamentally a social process, and we do it an injustice if we do not also consider the modifications to the perceptions and practices of the people involved in the process.

## **Conclusion**

Our aim in editing this special issue was to provide models of genre research. The four articles in this special issue nicely illustrate the variety of approaches to the study of genre of digital documents. We thank all of the authors and all who contributed to this issue, the reviewers and the editors for providing us this forum. We hope the examples provided here provide inspiration for future genre research.

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