Review Article

Sichen Ada Xia*

City University of Hong Kong, Hong Kong SAR, China
scxia2-c@my.cityu.edu.hk

GENRE ANALYSIS IN THE DIGITAL ERA: DEVELOPMENTS AND CHALLENGES

Abstract

The widespread adoption of digital communication has led to the evolution of human society into a digital and multimodal era. As genres are constructed to address the problems existing in reality, they tend to absorb the digital and multimodal elements and are developing into new forms and functions. In consideration of these developments, genre scholars have devised theoretical and methodological toolkits that might respond to reality. However, these newly formulated insights are dispersed among various studies which warrant a comprehensive review for the future scholars to refer to. In this context, the present article surveys a wide range of studies available in the literature and identifies three major developments in the genre analysis, namely, digital genre analysis, multimodal genre analysis, and genre innovation. In addition to these developments, it has been observed that in the digital era, the genre analysts are confronted with epistemological, methodological, and ethical issues. In consideration of these issues, the present report discusses the possible solutions that the analysts may consider while researching digital-multimodal genres. The developments and challenges identified in the present review reveal the social dimension of genre, and imply the necessity of viewing genre as a socially-oriented, dynamic, communicative phenomenon that corresponds to the continually evolving social reality.

141

* Corresponding address: Sichen Ada Xia, Department of English, City University of Hong Kong, 83, Tat Chee Avenue, Kowloon, Hong Kong.

1. INTRODUCTION

The notion of the *genre* has been continually holding an important position in language studies and language education. One reason for this is the fact that the useful, descriptive, and interpretive toolkits afforded by genre assist the ESP researchers and educators in understanding the reason behind the construction of a text in a particular way, prior to instructing learners to construct the text. Another reason, from the perspective of the ESP learners, is that the conventions involved in a genre may provide highly predictable steps for the beginners to follow in their own efforts of construction of texts.

In this backdrop, many investigations have been carried out into this notion (Bawarshi & Reiff, 2010). For instance, the English for Specific Purposes genre tradition defines a genre as "a class of communicative events, the members of which share a certain set of communicative purposes" (Swales, 1990: 58). The Systemic Functional Linguistics genre approach, which focuses on the form and meaning of language, regards genre as "staged, goal-oriented, social processes" (Martin, Christie, & Rothery, 1987: 59). The Rhetorical Genre Studies tradition, which centers on genres as social action in response to recurrent rhetorical situations, perceives genre as a "conventional category of discourse-based in large-scale typification of rhetorical action" (Miller, 1984: 163).

These definitions demonstrate the ubiquitous importance of the notion of *context* in studying genres. In particular, the notion of a *discourse community* in the ESP tradition, the argument of genres being *socially oriented* in the SFL tradition, and the belief that genres are responsive to frequently occurring rhetorical situations, indicate the social nature of the genre. In other words, a genre is socially constructed and intimately related to the social context in which it is situated. If the human society is constantly evolving, genres, which are rooted in and reflect the reality, should naturally be developing into renewed forms and functions. According to this argument, now since the contemporary society is becoming increasingly technology-driven, it is highly probable that the practice of genre analysis is influenced by this tendency. In fact, this assumption is evidenced by the theoretical and methodological toolkits that are developed by the genre scholars to address the changes caused by digital tools. However, these insights are dispersed among various studies, which warrants a comprehensive review of the concerning studies available in the literature in order to facilitate the genre researchers' understanding of the status quo of genre studies.

The present report aims to satisfy this requirement by tracing the efforts put by genre researchers for addressing the major changes caused by the rapidly developing digital media and the challenges that remain unanswered in the genre studies. On the basis of the understanding of the status quo of genre studies, the present report intends to discuss the manner in which the genre researchers may respond to these challenges in the technology-driven era. In order to achieve this aim, two research questions are raised:

First, what major developments in the present way of performing genre analysis are caused by digital technologies?

Second, what challenges are raised because of these developments? What are the possible solutions that may be undertaken by the genre researchers to address these challenges?

The present paper is structured in the following manner. In Section 2, the methodology used in the paper is described, and the considerations in terms of selecting the literature are introduced. In the next two sections, the findings that answer the research questions raised are presented. In Section 3, major developments in the genre studies are reported. Section 4 addresses the identified challenges in performing genre analysis in the present era. In recognition of the developments and challenges, in Section 5, the possible solutions to be considered in future research in this area are discussed. This section also makes conclusions and suggests implications.

2. METHODOLOGY

In order to explore the impact of digital media on genre theories and practices, the present report provides a review of a broad range of the concerned studies available in the literature. In the process of selecting and reviewing the literature, three factors are considered. First, the surveyed literature covers a range of inter-disciplinary topics, including genre analysis, computer-mediated communication, media studies, and multimodal discourse analysis. This is mainly because genre analysis is being increasingly conducted using a combination of genre approaches and other methodological approaches. Second, the surveyed literature includes diverse sources, primarily because the report aims to probe into both theoretical and methodological dimensions of genre studies, and this aim cannot be achieved by referring to one single type of literature. In particular, the findings of the present report are drawn from the monographs that focus mainly on the theoretical advances, the journal articles that center on methodological issues in empirical studies, and the edited books that have assembled the most representative work in the target areas. Third, in the process of referring to the literature, the focus of the investigation is maintained on how exactly the researchers respond to the newly emerging issues in genre analysis. In other words, for the purpose of the present paper, the investigation of the literature is focused primarily on the theoretical and methodological frameworks employed by the researchers to analyze the genres, rather than on specific genres that have been analyzed.

143

3. DEVELOPMENTS IN GENRE ANALYSIS

The surveyed literature reveals three major developments in the present way of performing genre analysis caused by the rapidly developing digital and multimedia technologies: digital genre analysis, multimodal genre analysis, and genre innovation studies.

3.1. Digital genre analysis

The first major development identified in genre studies is the internalization of digitality. Digital technologies create "a new communication setting which reconfigures the conditions to which pragmatic features of language respond" (Giltrow & Stein, 2009: 9). This novelty in the communicative contexts may be instantiated by, for example, the diverse users afforded by the Internet and the increasing user-author interaction in the process of constructing certain types of texts. These novelties are significant for the consideration by the researchers when analyzing the context in which a genre is constructed.

These changes caused by digitality warrant theoretical innovations in the genre theories to adapt to the new situations. Bruce (2010), while synthesizing the ESP and SFL genre approaches, presents a dual approach which considers every genre as a *social genre* defined as "socially recognized constructs according to which whole texts are classified in terms of their overall social purpose" (2010: 329) and as a *cognitive genre* focusing on the rhetorical purposes such as argumentation, explanation, and narration. The significance of this model in analyzing digital genres is that it accommodates the complexity of integrating social knowledge and rhetorical knowledge contributed by diverse participants into the process of construction of a digital genre.

A four-parameter framework for analyzing digital genres is presented by Heyd (2008). Firstly, the *vertical* parameter instructs the analysts to consider the level of generality in categorizing the genres and to distinguish between the notions such as supergenres, subgenres, and text types. Genres could also be studied *horizontally* so that the researchers could observe the manner in which a genre is related to other genres. For instance, a pop-out advertisement on the Internet may lead to a tourism website, which possibly leads to a confirmation letter. Relevant notions in this regard include genre repertoire (Orlikowski & Yates, 1994) emphasizing genres enacted to perform activities in organizational contexts or genre ecology (Heyd, 2008), which refer to a naturally formulating generic constellation. The third parameter is the ontological perspective which assists the scholars in identifying a genre from a top-down or bottom-up perspective. A top-down approach for identifying genres assumes that classifying genres is dependent on the pre-fabricated listing of salient features, while a

144

bottom-up approach, also referred to as 'folk taxonomy' (Heyd, 2008: 198), relies on the perception of the relevant discourse community in identifying the genres. The last parameter guides the researchers to view genres from a dynamic and diachronic perspective in order to understand the manner in which socio-technical factors, such as the development of digital platforms, influence the evolution process of a genre. In doing so, the genre is no longer viewed as an isolated and static entity, but rather as an interconnected, vibrant, and resilient social phenomenon. Specifically, a genre does not exist in a vacuum, but rather in a vertical or horizontal relationship with other genres. It also responds to the continually progressing technologies and benefits from them. These features of interconnectedness and vibrance allow the resilience of achieving different communicative purposes under different social circumstances to the genres.

Santini, Mehler, and Sharoff (2010) developed a three-level analytical framework to analyze "web documents" (2010: 9). In consideration of the multilayered structure allowed by the hyperlinks on websites, this framework instructs the analysts to study the web genres at micro, meso, and macro levels. Investigation at the micro-level focuses on "the page-level units and their constituents" (Santini et al., 2010: 11). Although this framework does not specify the resources that should be investigated at this level, it is reasonable to assume that it includes the semiotic features on a specific webpage, such as the use of text, image, and layout. At the meso level, attention is focused on the inner structure of the website, i.e. the sitemap. Finally, at the macro level, the analysts are instructed to investigate the inter-textual referencing involved in a website. For instance, how is a website, as a whole entity, connected to the external Internet world? Using this three-level analysis, researchers are able to gain a thorough understanding of the manner in which different layers of the web genre are orchestrated to serve its communicative functions.

Another attempt at considering digitality in genre analysis was performed by Askehave and Neilson (2005), who constructed a two-dimensional model to describe the digital genres as text, and, more importantly, as a medium. In this model, the users of digital genres are endowed with two identities on the basis of how they use the target genre. If the users are interested only in the text, they undertake the conventional role of a reader who "zooms in on the text" (Askehave & Neilson, 2005: 128); on the other hand, if the users use the digital genre as a portal to other information sources, their identities change from readers into navigators and the text becomes a medium. This model is applicable in the description of the characteristics of certain hyperlink-dominated digital genres such as the homepage.

However, one possible criticism against this framework is that it does not provide a clear explanation of how the concept of move could be operationalized in a text containing hyperlinks, which might interrupt a traditionally defined rhetorical move unit (Mehlenbacher, 2017). In order to respond to this criticism, the analysts may require considering the facts that digital genres supply the readers with various reading paths (Baldry & Thibault, 2006) and that a reader

may choose to read according to a dominant mode used in a text (Kress, 2003). For instance, when reading a homepage containing a large portion of text along with a hyperlink, a probable reading path would be to read the complete text first, prior to clicking the hyperlink which would lead to a different rhetorical structure.

In this section, the surveyed literature informs the researchers regarding one significant development in genre studies, namely, digital genre analysis. This development has been facilitated by advances in digital technologies, which cause dramatic changes in communicative settings. These changes further implore renewed frameworks in order to facilitate analytic procedures. The frameworks introduced above approach the digital genres from various perspectives. Despite the different points of emphasis in these frameworks, they deal with a common theme in digital genres, namely, the enhanced interconnectedness among the discourses. Although it is common for genre analysts to place a genre in relation to other genres, this practice has become complicated because of digital technologies that enable a text to be conveniently hyperlinked to other texts. This function of hypertextuality further produces possible ways of constructing genres, and at the same time, it enables the readers to consume genres in their own customizable manners. This affordance, therefore, requires the analysts to consider the differences created by the hyperlinked content in the realization of communicative purposes of the genre, especially when compared with a non-digital genre without hyperlinks.

146

3.2. Multimodal genre analysis

The second notion that appeared frequently in the surveyed literature was the *multimodal genre*, which refers to the genres that involve the use of multiple communicative modes. According to Norris (2004), communicative modes may be divided into embodied and disembodied modes. The former refers to the modes that are produced by humans to express their thoughts, feelings, or perceptions, for example, speech, gestures, head movement, facial expression, gaze, etc., while the latter refers to the modes to which people may react, such as print, layout, and music. These two types of modes, when combined, construct various multimodal genres. Since the present report considers the role of digital technologies in influencing communication, this section discusses only the research works concerning digital-multimodal genres that have been constructed mainly by disembodied modes.

The multimodal genre analysis approach applies the notion of the genre being a socially-motivated, goal-oriented activity for multimodal communication. This approach assumes that all genres are multimodal, as a genre is a higher-order phenomenon that imposes a structure of communication, which itself is inherently multimodal. The literature that has been referred to informs two aspects of

methodological progress, namely, multimodal move analysis, and the Genre and Multimodality framework.

3.2.1. Multimodal move analysis

Multimodal move analysis is an enhanced version of the move/stage analysis method used in the ESP and SFL genre approaches. In the analysis of text-dominated genres, the analysts normally begin with the identification of the rhetorical moves/stages in a text, followed by the investigation of the manner in which lexical, grammatical, and organizational resources are exploited to realize each move, and eventually achieving an understanding of how these moves, as functional units, together realize the communicative purpose(s). However, when applying this analytical framework to the analysis of multimodal genres, it is necessary that the researchers notice that the realization of individual rhetorical moves would probably involve multiple semiotic resources. As elaborated by van Leeuwen (2005), while analyzing these "multimodal stages" (2005: 76), it is required that the analysts identify the different modes involved in an individual move and understand the relationships among the modes to decide whether the move is elaborative or extensive.

This method may be integrated with other discourse analysis approaches for investigating genres. For instance, Lam (2013) integrates this method with the corpus approach in order to investigate the inter-discursive performance, hyper-textuality, and multimodality in a web genre named the Internet group buying deals. Using the combination of the quantitative approach and the qualitative approach, the author was able to calculate the frequency of each move and how the multimodal elements were exploited to realize each move. One interesting finding of Lam's research was that multimodality could be viewed as a continuum, with "mostly linguistic" being one extreme and "mostly multimodal" (Lam, 2013: 17) the other, and that the level of multimodality in each move is, as she argued, determined by the specific communicative function of that particular rhetorical move.

In addition to static multimodal genres, the multimodal move analysis method may also be applied to the investigation of dynamic genres such as videos. Hafner (2018a) applies this method to investigate an expert digital genre, namely, the video methods articles, which refers to the videotaped demonstration of laboratory procedures used by experimental scientists. Subsequent to the identification of the moves and steps involved in the genre, the author elaborates on how the written, spoken, and visual modes interplay in the move of Demonstration and how these modes are manipulated for enhancing audience engagement in the move of Introduction.

In summary, although the list of the studies using multimodal move analysis method is not long, the existing studies in the literature have confirmed the potential of this method in extending the move analysis method, from its

traditional use in the analysis of text-dominating genres to the investigation of both static and dynamic genres involving multimodal elements.

3.2.2. The genre and multimodality framework

The second progress in the study of multimodal genres is the development of *genre and multimodality* framework (hereafter, abbreviated as GeM) (Bateman, 2008). This model is inspired by the notion of the *convention* in the concept of genre. In traditional genre theories, the genre is regarded as an outcome of certain social contexts, and therefore, the organization and lexico-grammatical choices involved in the genre are constrained by certain communicative purposes (Miller, 1984; Swales, 1990). Scholars using GeM extend this understanding to the construction of multimodal documents and argue that the selection of multiple semiotic modes is also socially motivated and constrained (Bateman, 2008, 2014a; Bateman & Wildfeuer, 2014; Evangelisti Allori, Bateman, & Bhatia, 2014; Hiippala, 2014, 2017).

On the basis of this assumption, a framework for the systematic and empirical study of multimodal genres is constructed. According to Bateman (2008), analysts require considering three sources of constraints schematizing multimodal genres. Canvas constraints refer to the constraints resulting from the "physical nature" (Bateman, 2008: 18) of the multimodal artifact being produced, such as paper or screen. Production constraints refer to the constraints arising from the production technology, such as the limits on page size, the economy of time or materials, etc. Finally, the consumption constraints refer to the constraints caused by the way in which the document is consumed by the readers, including factors such as time, place, manner of acquiring the document, etc.

In consideration of these constraints, GeM framework offers an "annotation schema with multiple analytical layers" (Hiippala, 2017: 277) to guide the empirical analysis. When analyzing a multimodal genre, researchers first divide the basic units of the content in a document (base layer), for example, various blocks of images and texts on a webpage. Subsequently, they look at the hierarchical structure and the spatial arrangement of those units (layout layer), which is followed by the investigation of the rhetorical relationships among those basic units (rhetorical layer). Finally, the researchers are supposed to observe how the readers are navigated when they read the documents and how the target document is connected to other documents for facilitating the consumption of the document (navigation layer) (Bateman, 2008; Hiippala, 2014, 2017).

The annotation is then stored in a file for further reference with the other instances of the same genre in a corpus, and certain recurrent patterns could emerge from the cross-reference. Since this framework renders the multimodal features of a genre enumerable and quantifiable, it enables comparison among the multimodal genres from different perspectives. For instance, a few researchers using GeM performed cross-cultural comparisons in tourist brochures (Hiippala, 2012), global news items on tabloid newspapers (Kong, 2013), product packaging

148

messages (Thomas, 2014), and the landing pages of tourism websites (Nekić, 2015). Besides the cross-cultural comparison, cross-media comparisons in terms of usage of the multimodal elements have also been performed. For instance, Bateman, Delin, and Henschel (2007) investigate the differences in the usage of multimodal resources between traditional newspapers and electronic newspapers. Similarly, Hiippala (2017) compares digital long-form journalism and the landing page of traditional feature journalism, and identifies the different uses of navigation resources such as hyperlinks between the two media.

The GeM framework provides a template for a thorough analysis of the multimodal genres by combining the quantitative approach with the qualitative approach. In addition, as evidenced by the aforementioned research work on the cross-cultural comparison, the GeM framework emphasizes that the study of multimodal artifacts requires considering the context of culture and situation.

3.3. Genre innovation

In genre analysis, digitality and multimodality have contributed to the third development in genre studies, the phenomenon of *genre innovation*. Prior to probing into this notion, it would be useful to recollect a closely related notion, i.e. genre convention. In his definition of the genre, Swales (1990) states that shared communicative purposes may *schematize* a genre in terms of structure, content, and style. Miller (1984: 163) interprets genre as "a *conventional* category of discourse-based in large-scale typification of rhetorical action". Words such as *schematize* and *conventional* are used to highlight norm or convention as a core feature of the genre. Tardy (2016: 9) echoes the statements of the aforementioned authors by arguing that "without a norm, we cannot have departures; without departures, we cannot have innovation". Therefore, genre innovation, according to different scholars, refers to "adapting the existing conventions in new ways" (Fairclough, 1992: 69), genre creativity achieved through variation and critique (Devitt, 2004), or appropriation of generic resources from one genre to another (Bhatia, 2004, 2017). A further systematic definition is offered by Tardy (2016: 9), who describes genre innovation as "departures from genre convention that are perceived as effective and successful by the text's intended audience or community of practice".

Tardy's definition identifies two elements in genre innovation. Firstly, the author intends to flout the established genre conventions to a certain extent. Secondly, the departure requires to be acknowledged by the related discourse community. In consideration of these two elements, several questions may be raised. Why does genre innovation occur? How far does a genre require straying in order to be regarded as an innovation? Who all are eligible for innovating in constructing genres, only the expert authors or all the authors? How may we measure the degree of acceptance of an innovated genre?

149

In order to answer these questions, genre scholars have put forward certain conceptual and analytical frameworks. Bhatia (2004, 2017) argues that genre innovation in the professional context stems from the requirement of people to achieve their private intentions without conspicuously violating the publicly accepted communicative purposes. These requirements lead to discursive strategies such as genre mixing and genre-bending which, if recur in similar communicative scenarios, could contribute to relatively stable genre colonization and appropriation. Tardy (2016) puts forward a further systematic analytical framework for researching innovation in the academic context, which includes the investigation of text, social environment, and readers' reception. In order to investigate texts, the author advocates the application of the move analysis method and the corpus-based text analysis methods, with special attention to the atypical use of rhetorical strategies. Since texts are constructed in a social environment, the author further suggests using ethnographic and longitudinal approaches to achieve a thorough understanding of the social context where the innovation is occurring. Besides text and social environment, Tardy also advocates the consideration of the responses of actual readers as it is the readers who "give rise to judgments of innovation" (Tardy, 2016: 47). In order to achieve this, several quantitative and qualitative approaches may be employed, including "correlational studies, textual responses, observational studies conducted on readers, diachronic studies, and experimental studies" (Paul, Charney, & Kendall, 2001: 389).

The trend of genre innovation has been facilitated largely by digitality and multimodality. For instance, Hafner (2018a) identifies two innovations in a digital academic genre referred to as the video methods articles (VMA). Firstly, afforded by multimodality, this genre demonstrates direct audience engagement, which is a sign of colonizing generic features of a conference presentation. Secondly, the digital technologies used in VMA allow the precise demonstration of laboratory procedures. This is almost impossible to realize in traditional research articles where writing is the dominant mode of communication. Therefore, in this digitally mediated academic genre, use of digital and multimodal resources contributes to its departure from the traditional academic genres. Another genre referred to as the science-focused crowd-funding proposal (Mehlenbacher, 2017) is a hybrid of the traditional grant proposal and the scientific research article. Different from the traditional grant proposal, the readers of which consist of mainly the experts in the target area, this new genre has a wider range of online audiences with diverse backgrounds. In order to magnetize the online audiences, the genre manages to employ multimodal resources such as images and short films, which furthers its departure from the traditional genres. The aforementioned two examples indicate that genre innovation arises as a result of genuine communicative requirements and that in certain circumstances, these requirements may be satisfied by digital technologies and multi-media.

4. CHALLENGES IN GENRE ANALYSIS

The second objective of the present report was to identify the challenges confronting the genre analysts. The literature survey revealed that the challenges caused by digitality and multimodality mainly include identifying the genre types, determining the generic structure, demarcating the context, and making decisions on the ethical issues.

A primary difficulty that confronts the researchers in the digital era is the identification of a genre. This difficulty is caused mainly because of the different levels of generality in the genres (Bateman, 2014b; Giltrow & Stein, 2009; Heyd, 2016). For instance, could "cybergenre" or "chat" be viewed as genre types? Bateman (2014b: 240) problematizes this nomenclature by criticizing the lack of "useful genre commonalities" that could be generalized from this way of naming. In order to solve this problem, a few researchers propose to establish a system that differentiates between supergenre, genre, and subgenre for demonstrating different levels of granularity in describing the features of a genre (Askehave & Nielsen, 2005; Giltrow & Stein, 2009). Nevertheless, systematic theories to describe the properties of the newly-emerging multimodal and digital genres have not been formulated so far (Bateman, 2014b).

The second difficulty encountered by the researchers is how to determine the generic structure of the multimodal genres. This challenge arises mainly due to the uncertain reading paths afforded by digitality and multimodality (Bateman, 2008, 2014a, 2014b; Giltrow & Stein, 2009; Kress & van Leeuwen, 2006; van Leeuwen, 2005). Different from the traditional text-dominated genres which contain "linear succession of stages" (van Leeuwen, 2005: 75), multimodal and digital genres provide the readers with options to determine their own reading paths, which are not necessarily linear and could be circular or even concentric. These self-determined reading paths could result in different ways of composing meaning (Kress & van Leeuwen, 2006). A vivid example of this contrast may be obtained in the example of four bird field guide pages published in four different years provided by Bateman (2008, 2014b). The text-dominated guide page in 1924 offered the readers an almost exclusive choice of reading the guide in sequential order; however, the guide page in 1996 which contained an increasing number of visual elements and side columns, supported multiple reading paths. Van Leeuwen (2005) explicated the notion of multiple reading paths by using examples of an exhibition room and a CD-ROM containing educational material for children and concluded that the reading path is a cognitive decision to read from the most salient elements to the less salient ones.

The third difficulty lies in the demarcation of the context in which a genre is situated. Digitality complexes the spatial, temporal, and cultural aspects of the social contexts through the creation of different strata of online and offline spaces (Jones, Chik, & Hafner, 2015). This complexity is further complicated due to an enhanced interaction and blurred boundaries between the online and offline, the

physical and the virtual spaces (Hafner, 2015; Jones, 2010). As the participants shuttle between different spaces, the integrity of the context may somehow be invaded, and this invasion could impact the construction of the genre in the context. In the view of the high complexity in capturing the context of digital discourse, researchers have been suggested to develop appropriate strategies to collect data regarding the online and offline context (Hafner, 2018b).

In addition to the challenges related directly to the analytical practices, in the digital era, genre researchers encounter ethical dilemma at certain times. The two intertwined questions on ethics arise against the background of digitality. First, the digital technologies, to a certain extent, blur the boundary between private and public, which in turn raises questions regarding the extent to which a study might jeopardize or invade the participants' privacy. For instance, considering the case of online chatting room communication, King (2015: 134) argues that "even though that chatting was conducted in 'public', it was only intended for a *certain* public– the men who sought those chat spaces, registered a nickname, and spent time chatting there". This argument implies that even though the participants in the chatrooms were posting in publicly accessible forums, they nevertheless viewed the chatroom as a kind of private space (Hafner, 2018b: 385). Therefore, genre researchers are encountered with a decision to be undertaken in terms of whether the targeted context is a public or a private space. The answer to this question could lead to the second issue. If the evaluation of the context indicates that the target context is a private space, then how do the researchers obtain informed consent from the diverse participants on the Internet? These ethical considerations are important for the genre researchers to contemplate in their analysis of online genres.

5. DISCUSSION AND CONCLUSIONS

The present report provides insights into the latest developments in genre studies and identifies the challenges encountered by genre researchers. The surveyed literature reveals three major theoretical and methodological developments in genre studies. First, rapid developments in digital technologies lead to the emergence of renewed communicative settings and novel generic practices, which warrants the genre scholars to develop frameworks that address the new generic features resulting because of digitality. The frameworks which probe the digital genres from different perspectives share the common denominator of addressing the function of hypertextuality involved in the digital genres. This reminds the genre researchers of the necessity of positing a genre in an ecosystem for the investigation of the manner in which a genre is intertextually related to other discourses.

The second development in genre studies is the increasing consideration of the use of multiple semiotic resources in digital-multimodal genres, which is

allowed by the advances in multimedia. The fact that an increasing number of genres employ multimodal resources to achieve their communicative purpose raises two major questions. The first question is how the genre scholars may identify the generic patterns in a non-linear text, such as a poster or a webpage, in an empirical manner. A follow-up question is how these scholars may systematically investigate the utilized multimodal resources in order to realize the communicative purposes. In consideration of these two questions, the Genre and Multimodality framework and the multimodal move analysis method were developed. The third development in genre studies is genre innovation, defined as the departure from genre conventions. In order to study innovations in generic practices, scholars have been advised to consider the receptions of the readers, in addition to the text and the social context.

It is noteworthy that the three developments described above are interrelated. The development of digital technologies allows the utilization of multiple semiotic resources in the construction of digital–multimodal genres. Moreover, the tendencies of digitality and multimodality contribute to the innovation of genres, mainly because the digital functions and the multiple modes of communication prepare the authors with resources to achieve unconventional communicative purposes or to achieve communicative purposes in an unconventional way. Therefore, when investigating digitality, multimodality, and innovation in genres, it is useful for the researchers to have the mindset of viewing these developments as interconnected, and to further explore how these developments facilitate each other.

In addition to these developments, digital media also challenges the genre analysts with epistemological, methodological, and ethical challenges. The epistemological issue centers on the identification of the genre types. In order to address this issue, a possible and primary direction is to go back to the eternal dichotomy of analyzing language, i.e. its form and function. Applying this pair of concepts for the identification of a genre from a class of texts, either digital or non-digital, multimodal or non-multimodal, the analysts may investigate whether these texts have commonalities in terms of linguistic, organizational, and navigational (if applicable) features, and at the same time, whether they have shared communicative purposes. A comprehensive consideration of the form and function of the genres may complement the probable subjectivity and "impressionistic characterizations" (Bateman, 2014b: 245) in identifying genres in the digital era.

The methodological challenges encountered by the genre analysts include the recognition of the generic structure and the demarcation of the context. The reason for the difficulty in recognizing the generic structure is that digitality and multimodality allow non-linear textual structures. Although it is not possible to draw a complete procedural framework at this stage by synthesizing perspectives of different scholars, in order to handle this difficulty, a preliminary analytical protocol may be generalized. An initial step that the analysts may undertake is to determine whether the target genre is linear or non-linear. Multimodal genres with

153

linear and sequential stages, such as text-dominated genres or films, may be analyzed by adopting the multimodal genre analysis method (see Section 3.2.1).

In the case of genres with a non-linear structure, the analysts may select between a reader-centered and a design-centered approach. A reader-centered approach implies that the identification of the generic structure is dependent on how an individual reader chooses his/her specific reading path, regardless of the path intended by the author. This could be identified by the use of eye-tracking methods (Bateman, Wildfeuer, & Hiippala, 2017) to trace the readers' reading trajectory. The advantage of the reader-centered perspective is that the researchers are able to have the exact knowledge regarding an individual reader's "traversals" (Lemke, 2009: 283) in reading a non-linear discourse, thereby allowing the analysts to observe how the reader reconfigures the meaningful elements and customizes his/her own generic structure. However, the disadvantage of this perspective is that since different readers may select different reading paths, it would be energy-consuming and unrealistic to invite all the readers to trace their reading paths. A supplement to this disadvantage is what could be denominated as a design-centered perspective. This approach begins with an analysis of the multimodal or the digital design itself, regardless of the multiple reading paths that the readers are probably going to undertake. A typical method based on this perspective is cluster analysis, which is widely adopted in the analysis of WebPages or posters (Baldry & Thibault, 2006; Benson, 2017).

The second methodological difficulty is associated with the demarcation of the boundary of the context and is caused by the fact that digital technologies multiply the contextual layers. In order to gain a comprehensive understanding of the context, an important step which the researchers may undertake is to develop an applicable taxonomy of the environments which shape the context. Hafner (2018b) described the three contextual layers that could exert an impact on the construction of genres online, i.e. the physical environment, the virtual environment, and the screen environment. These three layers could intersect and contribute to the formulation of the situation in which a genre is constructed. In addition to the situational context (Jones et al., 2015), it is necessary for the researchers to investigate the global context in which a genre is situated as well (Benson, 2017), because digital technologies enable "new and complex global flows of cultural products and ideas" (Jones et al., 2015: 9) that could impact the genre construction practices.

It is noteworthy that besides the increased complexity, digitality also brings with it convenience for the researchers in analyzing the context. One important affordance of digitality is that it enables the researchers to investigate readership. Earlier, when an article was published, it was inconvenient for the researchers to investigate the manner in which the readers responded to the text, as they were unable to specify who had read the work. However, with the prevalence of digital technologies, researchers are now able to observe the readership by collecting and analyzing the comments following the online discourse (Sugimoto & Thelwall,

154

2013; Sugimoto et al., 2013; Tsou, Thelwall, Mongeon, & Sugimoto, 2014; Veletsianos, Kimmons, Larsen, Dousay, & Lowenthal, 2018).

Digital technologies also bring with them the consideration of ethical issues. In order to approach the ethical aspect of digital discourse research, analysts could begin with distinguishing between the private and the public domains. Researchers may first comprehensively evaluate the target communicative scenario by asking the following questions: Where does the communication occur? Does the venue include specific notifications regarding how the contents should be used, such as the 'terms of use'? Who are the authors and addressees of the discourse? Do they possess the legal, physical, and mental capacity to undertake decisions on whether their utterances could be studied? (AoIR, 2002; Hafner, 2018b). If in the evaluation the target context is determined as publicly accessible, such as in the case of YouTube texts (Benson, 2017), YouTube comments (Benson, 2015), or TED talk comments (Sugimoto & Thelwall, 2013; Sugimoto et al., 2013; Tsou et al., 2014; Veletsianos et al., 2018), where the posted contents encourage responses from the public or the participation of general public, the researchers are under less obligation to protect privacy in the context with high publicity.

On the other hand, if an all-encompassing evaluation of the context indicates that it is a communicative scenario with limitations on entry or sensitive personal experiences, it is necessary for the researchers to consider how to obtain consent from the participants using appropriate means. In a virtual communication context such as an online chatting room or a forum, it may be different for the researchers to obtain informed consent compared to obtaining consent in an offline context. The means of informing participants are dependent on the functions afforded by the digital site or applications. For instance, in the chatting room studied by King (2009, 2015), researchers were able to contact the participants individually through anonymous emails. After asking for permission from them, the researcher directed them to another website where they could access all the transcriptions and subsequently undertake decisions regarding the deletion of certain data, removal of their username, or complete withdrawal from the project. Angouri and Sanderson (2016) utilized the functions afforded by a healthcare forum to obtain the participants' consent. Although the authors could not send emails to the users individually, they could, by following the terms of use mentioned on the forum, post an introduction to the research project to inform the participants regarding the objectives of the research and the participants' rights. Subsequently, the authors allowed a certain period of time for the minor users to withdraw from the project and for the participants to indicate their preference for the use of a pseudonym. In summary, while handling the ethical issues arising during the analysis of digital genres, the researchers are advised to consider the issues including consent, harm, data protection, anonymization, and credit (Hafner, 2018b), prior to utilizing the resources afforded by digital technologies.

The developments and challenges identified in the present report confirm one significant dimension of the genre, which is that the genres are socially-

motivated and constructed communicative practices. Genres are continually evolving and responding to the eternally changing human society. Therefore, it is important that the genre scholars consider the evolutions in social realities, and follow how these evolutions potentially impact the genre construction practices. In consideration of this requirement, the present study aimed to address one particular aspect of these evolutions: the latest progress and problems caused by digital technologies. The necessity of investigating the impact exerted by the digital technologies is also supported by Bateman et al. (2017), who approaches this issue from the perspective of the interrelation among genre, materiality, and multimodality, as evidenced by the following excerpt from their book:

> "As communicative situations become more complex, perhaps drawing on new technological capabilities and combinations of meaning-making strategies, being able to pick apart the constitutive contributions of material and what is done with that material will prove crucial." (Bateman et al., 2017: 110)

The present report also has pedagogical implications for ESP instructors. Since the achievement of communicative purposes increasingly relies on the employment of not just linguistic resources but also digital and multimodal resources, the instructors are required to provide the students with guidance on how to manipulate the digital and multimodal resources in their construction of digitally-mediated multimodal genres. A few researchers have already integrated multimodality and digitality in the design of ESP courses (Hafner, 2014; Hafner & Miller, 2019), and their practices have been proved to be useful in preparing the students for real-life communication.

In conclusion, the developments caused by the digital technologies and multimedia identified in the present report are required to be considered with caution due to the fact that digital media are advancing continually and rapidly, which implies that the influences exerted on the generic practices are also evolving incessantly. Furthermore, the suggestions put forward in the discussion section require re-evaluation when it comes to specific research questions. Moreover, it is worthwhile to conduct empirical studies to evaluate the feasibility of these suggestions, which would highlight addressing the unanswered questions related to genre analysis in the digital era.

References

Angouri, J., & Sanderson, T. (2016). 'You'll find lots of help here': Unpacking the function of an online Rheumatoid Arthritis (RA) forum. *Language & Communication*, *46*, 1-13. https://doi.org/10.1016/j.langcom.2015.10.001

AoIR. (2002). *Ethical decision-making and internet research: Recommendations from the aoir ethics working committee.* Retrieved from https://aoir.org/reports/ethics.pdf

Askehave, I., & Nielsen, A. E. (2005). Digital genres: A challenge to traditional genre theory. *Information Technology & People, 18*(2), 120-141.

Baldry, A., & Thibault, J. P. (2006). *Multimodal transcription and text analysis: A multimedia toolkit and coursebook.* London: Equinox.

Bateman, J. (2008). *Multimodality and genre: A foundation for the systematic analysis of multimodal documents.* London: Palgrave Macmillan.

Bateman, J. (2014a). Developing a GeM (genre and multimodality) model. In S. Norris, & C. D. Maier (Eds.), *Interactions, images and texts: A reader in multimodality* (pp. 25-36). Berlin, Germany: De Gruyter Mouton.

Bateman, J. (2014b). Genre in the age of multimodality: Some conceptual refinements for practical analysis. In E. P. Allori, J. Bateman, & V. K. Bhatia (Eds.), *Evolution in genre: Emergence, variation, multimodality* (pp. 237-269). Bern: Peter Lang.

Bateman, J., & Wildfeuer, J. (2014). A multimodal discourse theory of visual narrative. *Journal of Pragmatics*, *74*, 180-208. https://doi.org/10.1016/j.pragma.2014.10.001

Bateman, J., Delin, J. L., & Henschel, R. (2007). Mapping the multimodal genres of traditional and electronic newspapers. In T. D. Royce, & W. L. Bowcher (Eds.), *New directions in the analysis of multimodal discourse* (pp. 147-172). Mahwah, NJ: Lawrence Erlbaum.

Bateman, J., Wildfeuer, J., & Hiippala, T. (2017). *Multimodality: Foundations, research and analysis: A problem-oriented introduction.* Berlin/Boston: De Gruyter, Inc.

Bawarshi, A. S., & Reiff, M. J. (2010). *Genre: An introduction to history, theory, research, and pedagogy.* West Lafayette, Ind.: Parlor Press; Fort Collins, Colo.: WAC Clearinghouse.

Benson, P. (2015). Commenting to learn: Evidence of language and intercultural learning in comments on YouTube videos. *Language Learning & Technology*, *19*(3), 88-105. http://dx.doi.org/10125/44435

Benson, P. (2017). *The discourse of YouTube: Multimodal text in a global context.* London: Routledge.

Bhatia, V. K. (2004). *Worlds of written discourse.* London: Continuum.

Bhatia, V. K. (2017). *Critical genre analysis: Investigating interdiscursive performance in professional practice.* New York: Routledge.

Bruce, I. (2010). Evolving genres in online domains: The hybrid genre of the participatory news article. In A. Mehler, S. Sharoff, & M. Santini (Eds.), *Genre on the web: Computational models and empirical studies* (pp. 323-348). Dordrecht, Netherlands: Springer. https://doi.org/10.1007/978-90-481-9178-9_15

Devitt, A. J. (2004). *Writing genres.* Carbondale, IL: Southern Illinois University Press.

Evangelisti Allori, P., Bateman, J., & Bhatia, V. K. (2014). *Evolution in genre: Emergence, variation, multimodality.* Bern: Peter Lang AG.

Fairclough, N. (1992). *Discourse and social change.* Cambridge, Mass.: Polity Press.

Giltrow, J., & Stein, D. (2009). Genre in the internet: Innovation, evolution, and genre theory. In J. Giltrow, & D. Stein (Eds.), *Genres in the internet: Issues in the theory of genre* (pp. 1-25). Amsterdam: John Benjamins.

Hafner, C. A. (2014). Embedding digital literacies in English language teaching: Students' digital video projects as multimodal ensembles. *TESOL Quarterly*, *48*(4), 655-685. https://doi.org/10.1002/tesq.138

157

Hafner, C. A. (2015). Co-constructing identity in virtual world for children In R. H. Jones, A. Chik, & C. A. Hafner (Eds.), *Discourse and digital practices: Doing discourse analysis in the digital age* (pp. 97-111). London: Routledge.

Hafner, C. A. (2018a). Genre innovation and multimodal expression in scholarly communication: Video methods articles in experimental biology. *Iberica*, *36*, 15-42.

Hafner, C. A. (2018b). Digital discourses research and methods In A. Phakiti, P. De Costa, L. Plonsky, & S. Starfield (Eds.), *The Palgrave handbook of applied linguistic research methodology* (pp. 375-390). London: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-59900-1_18

Hafner, C. A., & Miller, L. (2019). *English in the disciplines: A multidimensional model for ESP course design*. London/New York: Routledge.

Heyd, T. (2008). *Email hoaxes: Form, function, genre ecology*. Amsterdam: John Benjamins.

Heyd, T. (2016). Digital genres and processes of remediation. In A. Georgakopoulou, & T. Spilioti (Eds.), *The Routledge handbook of language and digital communication* (pp. 87-102). Oxon: Routledge.

Hiippala, T. (2012). The localisation of advertising print media as a multimodal process. In W. L. Bowcher (Ed.), *Multimodal texts from around the world: Linguistic and cultural insights* (pp. 97-122). London: Palgrave.

Hiippala, T. (2014). Multimodal genre analysis. In S. Norris, & C. D. Maier (Eds.), *Interactions, images and texts: A reader in multimodality* (pp. 111-123). Berlin, Germany: De Gruyter Mouton.

Hiippala, T. (2017). An overview of research within the genre and multimodality framework. *Discourse, Context & Media*, *20*, 276-284. https://doi.org/10.1016/j.dcm.2017.05.004

Jones, R. H. (2010). Cyberspace and physical space: Attention structures in computer-mediated communication. In A. Jaworski, & C. Thurlow (Eds.), *Semiotic landscape: Text, space and globalization* (pp. 151-167). London: Continuum.

Jones, R. H., Chik, A., & Hafner, C. A. (2015). Discourse analysis and digital practices. In R. H. Jones, A. Chik, & C. A. Hafner (Eds.), *Discourse and digital practice: Doing discourse analysis in the digital age* (pp. 1-17). Oxon: Routledge.

King, W. B. (2009). Building and analysing corpora of computer-mediated communication. In P. Baker (Ed.), *Contemporary corpus linguistics* (pp. 301-320). London: Continuum.

King, W. B. (2015). Investigating digital sex talk practices: A reflection on corpus-assisted discourse analysis. In R. H. Jones, A. Chik, & C. A. Hafner (Eds.), *Discourse and digital practice: Doing discourse analysis in the digital age* (pp. 130-143). Oxon: Routledge.

Kong, K. C. C. (2013). A corpus-based study in comparing the multimodality of Chinese- and English-language newpapers. *Visual Communication*, *12*(2), 173-196. https://doi.org/10.1177/1470357212471594

Kress, G. (2003). *Literacy in the new media age*. London: Routledge.

Kress, G., & van Leeuwen, T. (2006). *Reading images: The grammar of visual design* (2nd ed.). London: Routledge.

Lam, P. (2013). Interdiscursivity, hypertextuality, multimodality: A corpus-based multimodal move analysis of internet group buying deals. *Journal of Pragmatics*, *51*, 13-39. https://doi.org/10.1016/j.pragma.2013.02.006

Lemke, J. (2009). Multimodal genres and transmedia traversals: Social semiotics and the political economy of the sign. *Semiotica*, *173*(1-4), 283-297. https://doi.org/10.1515/SEMI.2009.012

158

Martin, J. R., Christie, F., & Rothery, J. (1987). Social process in education: A reply to Sawyer and Watson (and others). In I. Reid (Ed.), *The place of genre in learning: Current debates* (pp. 58-82). Geelong, Australia: Deakin University.

Mehlenbacher, A. R. (2017). Crowdfunding science: Exigencies and strategies in an emerging genre of science communication. *Technical Communication Quarterly*, *26*(2), 127-144. https://doi.org/10.1080/10572252.2017.1287361

Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, *70*(2), 151-167.

Nekić, M. (2015). *Tourists activities in multimodal texts: An analysis of Croatian and Scottish tourism websites*. London: Palgrave Macmillan.

Norris, S. (2004). Multimodal discourse analysis: A conceptual framework. In P. LeVine, & R. Scollon (Eds.), *Discourse and technology: Multimodal discourse analysis* (pp. 101-115). Washington, D.C.: Georgetown University Press.

Orlikowski, W. J., & Yates, J. (1994). Genre repertoire: The structuring of communicative practices in organizations. *Administrative Science Quarterly*, *39*(4), 541-574.

Paul, D., Charney, D., & Kendall, A. (2001). Moving beyond the moment: Reception studies in the rhetoric of science. *Journal of Business and Technical Communication*, *15*(3), 372-399. https://doi.org/10.1177/105065190101500305

Santini, M., Mehler, A., & Sharoff, S. (2010). Riding the rough waves of genre on the web: Concepts and research questions. In A. Mehler, S. Sharoff, & M. Santini (Eds.), *Genre on the web: Computational models and empirical studies* (pp. 3-30). Dordrecht, Netherlands: Springer. https://doi.org/10.1007/978-90-481-9178-9_1

Sugimoto, C. R., & Thelwall, M. (2013). Scholars on soap boxes: Science communication and dissemination in TED videos. *Journal of the American Society for Information Science & Technology*, *64*(4), 663-674. https://doi.org/10.1002/asi.22764

Sugimoto, C. R., Thelwall, M., Larivière, V., Tsou, A., Mongeon, P., & Macaluso, B. (2013). Scientists popularizing science: Characteristics and impact of TED talk presenters. *PLoS ONE*, *8*(4), 1-8. https://doi.org/10.1371/journal.pone.0062403

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.

Tardy, C. M. (2016). *Beyond convention: Genre innovation in academic writing*. Ann Arbor: University of Michigan Press.

Thomas, M. (2014). Evidence and circularity in multimodal discourse analysis. *Visual Communication*, *13*(2), 163-189. https://doi.org/10.1177/1470357213516725

Tsou, A., Thelwall, M., Mongeon, P., & Sugimoto, C. R. (2014). A community of curious souls: An analysis of commenting behavior on TED talks videos. *PLoS ONE, 9*(4), 1-11. https://doi.org/10.1371/journal.pone.0093609

van Leeuwen, T. (2005). Multimodality, genre and design. In R. H. Jones, & S. Norris (Eds.), *Discourse in action: Introducing mediated discourse analysis* (pp. 73-93). Oxon: Routledge.

Veletsianos, G., Kimmons, R., Larsen, R., Dousay, T. A., & Lowenthal, P. R. (2018). Public comment sentiment on educational videos: Understanding the effects of presenter gender, video format, threading, and moderation on YouTube TED talk comments. *PLoS ONE, 13*(5), 1-21. https://doi.org/10.1371/journal.pone.0197331

159

SICHEN ADA XIA is a PhD candidate at the Department of English, City University of Hong Kong. Her research interests include English for Specific Purposes, genre analysis, multimodality, scientific popularization, and digital literacy. She has published on these topics in journals such as *Chinese ESP Journal* and *RELC Journal.*