

Revolution or Remediation? A Study of Electronic Scholarly Editions on the Web

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The study examines in what form and to what extent media specific value-adding features are present in a selection of scholarly editions of literary works on the Web, concentrating on hypertextuality, interactivity and hypermediality. Besides form and extent, the study investigates whether or not the construction of the editions corresponds to theories and guidelines about how electronic scholarly editions should be designed to generate an added value from a scholarly point of view. The empirical approach is mainly qualitative and the selection consists of 31 editions. The results show that a majority of the editions does not incorporate all of the value-adding aspects. Mainly, the ability to use hyperlinks to bring larger amount of material together, and the use of links to show inter- and intratextual relations, have been realized. Only a minority of the editions exploits the possibilities of interactivity, especially the ability to read and submit user comments. Few editions integrate forms of media that a printed edition can not handle, i.e. sound and moving pictures. The conclusion of the study is that web editions seem to reproduce features of the printed media and do not fulfil the potential of the Web to any larger extent.

At the web site *Uncle Tom's Cabin and American Culture* you can read Harriet Beecher Stowe's novel in full-text and open different versions of the novel in virtual 3D.¹ You can also compare digitized scans of Stowe's original manuscript and the two first printed editions of the novel. Apart from this you can listen to songs from the novel, read reviews from the contemporary period, and watch film sequences and much more. The

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web site *Decameron Web* shows similar features. Here you can read the work in full-text and you are given the opportunity to choose between an Italian version and an English translation. While reading, you can change language at any time. With a search function you can search for persons, places or words and find out where in the text they occur. You also have access to contextual material about, for example, history, society and religion. Web sites like these represent a new emerging genre – electronic scholarly editions. These kinds of editions of literary works are the focus of interest in this article. Theories about their potential are investigated as well as how these kinds of editions are organized in practice – something that, as will be shown, not always coincide. One is easily impressed by editions such as the ones above. When studying a larger number of electronic editions, the overall picture is however not always as impressive. The theoretical literature speaks about this genre in terms of a *revolution*. We will argue that *remediation* is a more accurate term to use.

Editors of electronic scholarly editions commit themselves to meet the requirements of textual criticism. For example, it has to be declared what copy-text, if any, the edition is based on, and what changes, if any, have been done to the text. The scholarly requirements are in fact the same as in printed scholarly editions. What separates electronic scholarly editions from printed scholarly editions is the carrying medium.

The question why one chooses to create a scholarly edition in electronic form is interesting. Susan Hockey states that much of the interest concerning electronic text only focuses on access – that the material is made available for several persons at the same time with no regard to geography. However, as Hockey points out, to only have this as the main purpose for electronic publishing can lead to an electronic version that “replicates the original form without any of the added value which electronic technology can provide” (2000, 3). Instead, one should focus on functions that cannot be realized in print. The Internet as a medium has a set of qualities that can be used to give the electronic text an added value towards the printed text, an idea put forward by further scholars than Hockey. Peter Shillingsburg argues that the potential of electronic editions to be something more and different than print editions ought to be utilized (1996, 25). In addition to Hockey and Shil-

lingsburg, there are several theorists discussing the flaws of the printed edition and the possibilities of the electronic edition in terms of adding specific values (see, for example, McGann 1997; Lavagnino 1995).

The debate about the potential of electronic scholarly editions has been going on for several years, and the participants come from a wide range of disciplines and spheres of activities. For example, we find literary theorists, textual critics, library and information science scholars, linguists and philologists. At the same time, a number of projects are taking place in which electronic editions are being developed. However, there is a lack of clinical research about whether these projects in fact make use of the possibilities that the medium has to offer. Apart from theoretical literature about the potential of electronic scholarly editions, there are but a few empirical studies in connection to practice. These studies often focus on one or a few projects and proceed from an inside perspective, that is, they are studies conducted by the very makers of the electronic editions. An example of this is found in *The Literary Web* by Johan Svedjedal (2000, ch. 5), where the prelude to and thoughts behind an electronic scholarly edition of the collected works of C. J. L. Almqvist are described. Another example is found in the articles by Jerome McGann about the making of *The Rossetti Archive*, where he has been actively involved (1996a, 145-183). However, a systematic review about whether the electronic editions realize the promised added value does not seem to exist. The question is: are the editions really as revolutionary as the more theoretical discussion implies?

Objective and research questions

What is the added value of the Web as a medium, and what are its specific features that supposedly generate this value? How can these improve the scholarly quality in an electronic edition? Have thoughts and theories about this added value been realized in practice? These questions formed the points of departure for the investigation presented in this article. What form the value-adding and specific features of the Web took, and to what extent they existed, was examined in a selection of electronic scholarly editions of literary works on the Web. This was done with the purpose of illuminating how a number of electronic scholarly editions correspond to theories about their potential added

value, and whether or not the editions in question could be said to express a radically new mediality, or if they rather reproduce the features of the printed medium.

The study was limited to three features: hypertextuality, interactivity and hypermediality. These have in particular been described by theoretical literature as value-adding features specific to the Web. Three research questions were asked at a general level:

- To what extent are the value-adding aspects of the mentioned features present in the examined editions?
- In what way is this manifest in the editions?
- Do the presence and form of these features in the examined editions correspond to theories and guidelines about how electronic scholarly editions should be designed to generate an added value from a scholarly point of view?

The article begins with a review of and a discussion about the added value that these three features are believed to generate, articulated both by theorists that focus on possibilities and normative guidelines. It then proceeds with an operationalization of the features where a number of concrete questions and variables that were tested on the primary material are sorted out. Then follows a summary of the empirical results. In the final part the analysis and discussion are found, as well as the conclusions of the study.

Method and material

The empirical approach was qualitative with some quantifying elements. Tendencies, similarities and differences among the editions were identified and analyzed using a set of fixed variables. The characterization of variables was based on theories about potential value-adding features specific for the Web. As the primary interest was on the shape of the editions, they were looked upon as “physical” objects with certain qualities and characteristics that have an influence on what can be said and how it can be said.² The method might be labelled as document analysis.

The focus of interest was on how the potential of the medium can be used in a scholarly context. Thus, the textual quality on the Web as whole was not considered. If the scholarly context requirement had been dismissed, the study would have risked ending in a statement that electronic texts are insufficient when it comes to textual and source criticism, which has already been stated in a number of studies (see, for example, Peurell 2000; Svedjedal 1997). Hence, scholarly editions based on textual criticism were chosen. Scholarly editions can be seen as tools to be used in the process of studying texts. They can also be looked upon as the end product of a scholarly work. A more precise definition concerning what kind of scholarly edition to be examined was not made. The concept of scholarly edition was made deliberately wide to encompass different kinds of editions, for instance critical editions and facsimile editions.

Literary classics are often published as scholarly editions due to the fact that they often have a long history and have been published in several versions. The material is complex and in need of explanatory comments (Hockey 1997, par. 2). A literary work can appear in different forms and can be adapted to various kinds of media. For example, revisions, dramatizations and adaptations for the screen are frequent in the publication of literary works. Reprints and new editions of a work result in several different texts with variations in spelling and typographical appearance. However, the literary work stays the same. Thus, the work can be regarded as an abstract intellectual entity while a transcription, a movie or a dramatization can be regarded as manifestations through which the work can be experienced (Svedjedal 1999, 149f.). When several manifestations of a work occur, they can be seen as versions of that work.³

The web based electronic edition is represented by the web site in which the edited work/works, critical commentary and possibly contextual material are published. In this study, editions containing one work with several versions or several works by one author were examined. Furthermore, the editions in mind were primarily designed to be distributed electronically. This means they were not previously printed scholarly editions that had been digitized.

The main criterion of edition selection was the scholarly requirement. Therefore, the editions collected for the study were those which met a basic scholarly criterion of usability in research and education. This was ascertained by either reading the editorial principles or the purpose statements of the editions or by identifying the presence of scholarly tools such as a critical apparatus. Furthermore, the editions had to exhibit statements of responsibility, both for the critical level and for the publication history and revisional maintenance of the digital material, for what copy-text that had been used and so forth.

31 electronic scholarly editions of literary works were used as the primary material in the study. All of these were freely accessible, and published on the Web with standardized markup languages like HTML/XML, and did not demand any software to be used other than a common web browser.⁴ Furthermore, they were considered to be relatively fixed, i.e. as finished projects, their form and structure determined. In the beginning, some 60 editions were found to be of potential interest. Almost half of them turned out to fall short when considering the scholarly requirements or because they were editions under construction. Some of these were only samples of editions published on CD-ROM.

It is not likely that every edition existing on the Web and fitting our selection criteria was found, but we do believe a major part of the electronic editions on the Web with free access was located. The outcome of the study is therefore believed to reflect the circumstances of the English speaking world, as they were during the period of our investigation (February-May 2002). Being a limited study with a lack of a selection frame, the conclusions are not claimed to be valid for all existing electronic scholarly editions, but should rather be seen as indicative and whose validity can only be verified by extended research.

The editions were studied by browsing through the sections of the editions, testing and observing the different functions. However, all available links in the editions were not followed due to the huge amounts of links. For example, one edition claimed to contain 32 000.³ Instead, a more general picture was aimed at. Parts of the editions with specific concern to the features hypertextuality, interactivity and hypermediality were then studied more thoroughly. The editions were analyzed with

regard to theories about the potential added value of each respective feature. This article only presents a summary of our results. However, all the studied variables and the outcome in form of categorization are presented and briefly commented. Tables that present the placing of the editions in categories are found in appendix 1.

Features of the Web: hypertextuality, interactivity and hypermediality

With the development of the Internet and the breakthrough of the Web in the early 1990s, the medium has become an object of interest in research and debates. The opinions differ as to the potential of the medium, what is new about it and whether it threatens to obliterate the printed book. The “old” medium – the print – often serves as a referential point in the discussions, and on the basis of this, similarities, differences, problems and possibilities come to light. The printed text is often described as linear, static, fixed and hierarchic while the electronic text is described as open, flexible, associative and changeable since it is based on a hypertext system – the Web (Pang 1998, pars. 5-11). The concept of hypertext⁶ is central here.

A recurring name in the discussion on hypertext is George P. Landow, who considers hypertext to be a specific feature of the computer environment. The automated linking in a network of computers is of central importance since, according to Landow, it breaks down barriers between one text and another, between authors and readers. By using hypertext, reading units can be quoted, cut and placed in a context desired by the reader. This decenters the text and the center of the text is instead decided by the position of the reader. Furthermore, the hypertext activates the reader who becomes a contributor in the forming of the text, rather than a merely passive receiver (1997, ch. 1-2).

However, Landow’s view on hypertext has been questioned. Scholars like Svedjedal and John Lavagnino claim that there is confusion about the meaning of the concept. Lavagnino (1995, par. 2) stresses that there are several different hypertext systems, but identifies one common denominator – the link. Printed text can therefore also be seen as hypertext when foot- or endnotes are being used. Nevertheless, hypertext in combination with computers makes a difference because of the

automated linking to the referenced material. Svedjedal comes to similar conclusions: some theorists only connect hypertext to digital media. Others have a wider view and would rather see hypertext as a structural form that can exist in any medium, however best realized in electronic form and in a network. Svedjedal joins the latter standpoint (1999, 153f.). Thus, hypertext can both be seen as a medium specific phenomenon requiring electronic form and as a structural phenomenon with connection to the organization of the text.

The concepts of interactivity and hypermediality also occur when characterizing the features of the Web. Interactivity can be defined as the reader's possibility to affect the production of signs as displayed on screen or in print. With a certain input from the reader, the textual output of the documents varies (Dahlström 2001, 65). Thus, the reader can influence the textual expression and adjust it to his/her interests and needs in a hypertext environment. However, printed text can also be seen as interactive. In *Cybertext: Perspectives on Ergodic Literature* Espen Aarseth points out that a number of computer based textualities have more in common with certain texts in print than with each other. The concept "ergodic literature" is used when describing literary texts where the reader is invited to complete the text, meaning that certain deliberate choices are demanded from the reader in order to establish a line of reading through the text (1997, ch. 1). In a hypertext environment hypermediality can also be realized, images (both fixed and moving) and sound can be integrated in ways not possible in print. Through the use of hyperlinks, different types of media can be connected to the text (Bolter 2001, 155f.).

Henceforth the concept of hypertext is used in the meaning of automated electronic linking, interactivity is understood as the user's possibilities to influence the textual expression, and finally, hypermediality is the inclusion of different types of media by the use of electronic links. However, the discussion has not so far been conducted in direct relationship to scholarly editions.

Electronic scholarly editions

Possibilities and potential

Publishing a scholarly edition on the Web was early conceived of in the following way:

The user might view the resources simply, as in an edition of a work without the introduction of a critical apparatus. A more complex approach is also possible, with the user following the critical apparatus at every turn. And finally, a rich and scholarly approach is possible, allowing the user to view manuscript (or printing) evidence or to examine the editor's assessment of the evidence by comparing high-quality scans of original pages to the marked-up transcriptions. With proper mark-up, an edition can be viewed in as many ways as the reader desires. It can be a variorum, a study edition, a critical edition, or historical evidence. The form the edition takes is defined by the user's needs or preferences. (Price-Wilkin 1994)

The quotation by John Price-Wilkin describes an edition designed in a flexible way so that it can assume different forms according to the diverse needs and interests of its users. In this way it is interactive. Furthermore, the edition has integrated different material and forms of media through the use of hypertextual links. Ray Siemens argues that this kind of web edition can be called a hypertextual edition:

the hypertextual edition, is most often embraced for its employment of hypertext to emphasise relationships of textual and extra-textual natures, facilitating the reader's interaction with the text and materials related to it with an ease unknown even in the best of scholarly editions published in print (Siemens 1998)

Similar lines of thought about the potential of the electronic scholarly edition are expressed by McGann and Lavagnino who in several articles elaborate further on the subject. In these articles, statements about the added value that the electronic editions are supposed to possess compared to editions in print are related to specific features of the Web. In his essay "Radiant Textuality" McGann argues that we are on the verge of a scholarly revolution: the gathering of all the resources that the libraries,

the museums and the archives hold and making them available online for all people irrespective of geographic distances (1996b, par. 12).

Furthermore, by designing scholarly editions for electronic distribution, new methods for critical studies and analysis can be developed. McGann considers knowledge a progressive process rather than an achieved state, and argues that this can be expressed in the electronic edition since its form is open and adjustable and can incorporate new material in a way the printed edition cannot. Hence the electronic edition can correspond to the cumulative nature of the scholarly work in a way that the static and fixed printed editions cannot. The electronic editions also offer flexibility in the way the information can be structured, meaning that constructed hierarchies do not have to be determining for new material (*ib.*, pars. 28f.).

In “The Rationale of Hypertext” McGann elaborates on the potential of the electronic editions as opposed to printed editions. Paper-based editing has obvious limitations: it cannot integrate new material and alterations without the publication of a new edition. The possibilities of integrating various images, musical arrangements of the literary work, and facsimiles of the original text are also limited. If this was hosted within the printed edition it would rapidly grow to constitute several volumes: one facsimile edition, one critical edition, and all the different versions of the work in question, annotations, contextual material and so on. Hence, the complexity of literary works cannot be fairly represented in printed editions, according to McGann (1997, 18f.).

Like McGann, Lavagnino means that the printed edition has difficulty containing and integrating all the versions of a literary work. In the printed edition this is usually handled by placing one version at the center, subordinating the others to be shown as textual variants in foot- or endnotes. This can be somewhat better managed by the use of parallel texts, but such an edition can rarely contain more than two versions of a work. In an electronic edition, new material can always be incorporated and the ideal is that the hypertextual edition should hold both electronic text and images of the previously printed pages in all the different versions of a literary work (1995, pars. 11-13).

The hypertextual base also allows for the material to be brought together and structured in a flexible and decentralized way, which means

that the users can navigate through the material according to their own purposes and interests. Hypertextual navigation, with the use of links to display textual relations between and within texts, gives the users a more powerful grip of what they read (Siemens 1998, par. 15). The possibilities of integrating different media forms are also greater, something McGann argues is important since “[t]exts are language visible, additional and intellectual” (1997, 25). Hence, text can be experienced through our different senses and expressed in different media, something that might be realized in electronic editions.

MLA and Shillingsburg

The visions of McGann and Lavagnino might seem too optimistic. However, influential normative guidelines on the construction of electronic scholarly editions express similar thoughts. The Modern Language Association (MLA) has produced guidelines for both printed and electronic editions. *Guidelines for Electronic Scholarly Editions* were published in December 1997. These focus on principles and scholarly needs and demands, maintaining a distance to purely technical matters. The goal of the guidelines are said to be “to enhance the usability and the reliability of scholarly editions by making full use of the capabilities of the computer” (MLA 1997).

At the beginning of the guidelines the MLA emphasizes the fact that the same standards of scholarly quality apply to the electronic as well as to printed editions, i.e. meaning that the copy-text and alterations of the text that have been made must be accounted for. In addition to this, it is stated that the material included in the electronic edition ought to be more inclusive, since the computer offers better possibilities to manipulate and organize large amounts of material. The guidelines state that the usability of the electronic edition would also improve if facsimiles of the original text were included and that other appropriate non-textual material will enhance the scholarly value of the edition. (ib., sec. I.D.1).

The MLA also mentions that the possibility of choosing between different versions and formats of presentation should be realized in the editions. For example, parallel readings are believed to facilitate scholarly use and should therefore be accommodated. The use of hypertext should

also make it possible for the readers to create and add their own links within the edition, for example to their own comments. In addition to the material within the edition, related material of other web resources could also be exploited by linking to it (ib., sec. IV).

Shillingsburg, closely related to the MLA, is more direct in his vision of what electronic editions might offer. Similarly to McGann and Lavagnino he stresses the problems of the printed editions, above all their inability to handle multiple versions of a literary work in a flexible way. Shillingsburg expresses his visions of an electronic scholarly edition: “an archive of editions with annotations, context, parallel texts, reviews, criticism, and bibliographies of reception and criticism” (1996, 24). He argues that certain standards ought to be followed when creating an electronic scholarly edition. Two principles are distinguished, where the first concerns:

the potential of the electronic editions to be something more and different from printed editions: electronic editions should be designed for multi-purpose, multimedia presentation, effectively breaking down barriers between the concepts: archives, editions, and course materials or tutorials (ib., 25)

The other principle concerns availability and mainly states that electronic editions should be designed to be platform independent. The principles also outline more concrete recommendations to follow. The first principle had relevance to our study. In this, Shillingsburg elaborates on the design of electronic editions and states the following: The edition should be multimedial, i.e. integrate text, image, color and sound. Interaction with the material should be facilitated. The users must have the possibility of navigating through the material at their own will. A user should be able to leave comments within the edition, to read other user’s comments and also to mark and quote text. A network of links should be created to variants of the text; the user should be capable of moving from one passage in a text to a corresponding passage in another. The different versions of a work and annotations should be available in different windows. Links to intertextual and contextual material, as for example to parallel texts, annotations, visual material, adaptations of the work to radio, theatre, and the movies, should also exist (ib., 33f.).

Shillingsburg also emphasizes that the editions must be user friendly. By this he means that the navigational structure must offer paths back to previous sections/pages no matter where the user are. The navigation system must be designed so that the users know their location in relation to the edition as a whole at all the time (ib., 35).

A new and better medium?

Some hypertext theorists make a reservation against the optimistic faith in the new medium expressed by McGann and his equals. These theorists want to balance the image of the potential added value offered by the Web, criticizing the simple dichotomy between paper based and electronic text. For instance, in *Remediation: Understanding New Media* Jay David Bolter and Richard Grusin offer a more sophisticated description of the differences between the two media. The concept of remediation is used to capture how the traits and structure of the older medium live on in the new medium, while at the same time being adjusted to the new technology. Bolter and Grusin write: “The true novelty would be a new medium that did not refer for its meaning to other media at all. For our culture, such mediation without remediation seems to be impossible.” (1999, 271). Thus, the new medium borrows and reorganizes the features of the old medium, imitates it but also makes direct claims to be better than the old one (Bolter 2001, 23f.).

Alex Soojung-Kim Pang also criticizes the simple paper versus electronic text dichotomy. He claims, similarly to Aarseth, that the major change is that text production and reading require an exchange between man and machine. Furthermore, Pang shows that the idea of pulled down barriers between reading and writing due to electronic text can be questioned (1998, par. 16f.). Pang argues that scholars like Landow are discussing non-existing possibilities, and claims that while the possibility to manipulate existing hypertext documents is real, it is not realized in practice (ib., par. 24).

Hence, terms such as multilinearity and multisequentiality are often ambiguous since they tend to alternately refer to the organization of the text and to the line of reading. Therefore, the assumed line of reading through the edition, i.e. the lines offered by the text, should be separated from the actual reading performed by the user, i.e. the lines the reader

chooses to follow (Wessely 2001, 14). Thus, a printed text can in theory be read in any order chosen by the reader, even if the assumed arrangement is structured from cover to cover.

In print the reader has the possibility to open a book at any page. In electronic form however, this can be prevented by only creating a few links as entrances to the text. This should be considered when the structure of the navigation system is being prepared. Otherwise there is a risk that the freedom of choice is smaller when reading an electronic text than when reading a printed one. In this way the editor maintains the power over the assumed order of reading.

Electronic text is not constrained by physical limitations in the way printed text is. In the electronic edition it is possible to include every version of a work. However, Hockey urges the makers of electronic editions to be careful in this respect, since the temptation to include as much material as possible might come at the expense of a manageable navigation system. Presenting the user with a number of parallel versions to choose from is usually described as an “empowerment of the reader”, but this can result in an increased confusion if the reader is not informed of the benefits. With a lack of a legible framework of the edition, as for example an overview, the reader is lost from the beginning (2000, 132f.).

Outline of the empirical study

In the previously described discussion three central features specific to the Web were highlighted: hypertextuality, interactivity and hypermediality. These features have been operationalized into distinct questions that formed the point of departure for our empirical study. Below follows an outline of this operationalization, which focuses on the added value that each feature might supply in an electronic scholarly edition.

Hypertextuality

The added value that can be derived from hypertextuality in an electronic scholarly edition is articulated in several ways by theorists such as McGann, Landow and Lavagnino. The hypertextual design enables the literary work to be connected to inter- and intratextual material as well as to contextual material. Intertextuality refers to relations *between* texts, such as allusions and references to other texts, while intratextuality

refers to relations *within* the text, as for example sections that relate to each other. Contextual material refers to material that places the work or the author in a larger context, such as material about the contemporary society. By the use of hyperlinks the electronic edition can provide immediate access to referred material in other web resources. The work is then no longer a physically isolated unity, but a text in its context.

That access is essential becomes evident in the criticism of printed editions with their inability to handle the complexity of literary works. In electronic editions, relations within and between works can be handled in a flexible way, for example through frames and pop-up windows. These might not bother the reader in the same way as turning the pages backwards and forwards between different sections in a printed edition. This flexible design also brings an added value from a scholarly point of view, since it does not require that one single text has to be at the center. If the reader can navigate freely through the edition by the use of hyperlinks, constructed hierarchies between and within texts can be deconstructed. This facilitates critical and associative reading by the user.

These aspects of hypertextuality were included in our study. The potential added values of hypertextual linking were examined in three ways:

1. First the design of the navigational structure that surrounds the literary works was studied. Entries to the manifestations of the works and exits back to hierarchically superordinate pages were followed. This was interpreted in terms of decentralized vs. hierarchic structure of the navigation system. A decentralized structure refers to a navigation in which few restrictions for the user exist, while the hierarchic description refers to a structure where the reader has to follow only a few established paths through hierarchically structured pages in the edition.
2. Then the design of the internal hyperlinking within the manifestations of the works was studied, for example how one manifestation was connected to other versions of the same work and annotations.

3. Finally the assumption that the electronic edition through its hypertextual base can contain an unlimited amount of material without becoming physically too “heavy” was examined.

Interactivity

Theorists such as Siemens, Price-Wilkin and Shillingsburg all describe added values that can be provided by interactivity. Essential is the ability of the electronic edition to be flexible so that it can be used by different readers with different needs, preferences and objectives. One way of achieving this is letting the edition contain several different versions of the same work so that the readers can have their own choice and even have the possibility of comparing different versions through parallel readings. In our study, interactivity was regarded as the possibility for the user to choose, for example what version to read and how it should be presented on screen. This means that the user would be able to adjust the physical appearance of the text by choice, something not possible in a printed edition. The reader can e.g. choose between looking at a transcription of the text or a facsimile of the original text, or she can adjust the interface by choosing to read a text with or without frames or by enlarging or diminishing pictures and texts.

Search capabilities and the possibility for readers to submit reactions and comments to the edition are other value-adding aspects of interactivity. Comments by the readers can be published within the electronic edition. The reader can thereby be an active participant in shaping the edition, and not merely a passive receiver of a fixed text. Furthermore, by making the edition searchable, the reader can select specific terms according to his or her interest and needs, and be directly connected to a relevant passage, or study the occurrence of specific terms in the edition as a whole or in the different manifestations of a work.

Thus, possibilities for the readers to choose between different versions of the same work, different types of manifestations and their various screen presentations were studied. Apart from this, search capabilities as well as the possibility to discuss and comment on the edition were examined.

Hypermediality

If hypertext is regarded as blocks of texts connected to each other by electronic linking, then the concept of hypermedia could be said to expand the idea of hypertext by including visual information, sound and moving pictures. The added value that can be generated by the presence of hypermedia can be described as follows: A literary work can be manifested and adapted to different media – printed text, film, theatre and music. The text itself can furthermore be regarded as “language visible, auditional and intellectual” (McGann 1997, 25). This can be expressed in a hypermedial edition, where the reader has access to text, sound and color in an integrated way and are encouraged to use their different senses simultaneously.

The Web offers the possibilities of a hypermedial edition. However, the presence of hypermedia in itself does not automatically generate an added value; presenting a picture of for example an author does not necessarily enhance the scholarly value. The value is more evident if the hypermedial edition contains examples of adaptations of the literary work to different media, if it clarifies contextual material or in different ways visualizes the work. Furthermore, what is interesting is the role of hypermedial elements in the edition, e.g. if one can read and listen to a recitation of the text at the same time, or if hypermediality is restricted to the contextual material. Hypermediality as a feature was studied by looking at what kinds of different media forms that were presented in the editions and what function they performed.

Main results

Hypertextuality

Studied variables and categories found

- *Navigational structure*
 1. The whole edition is decentralized (4 editions)
 2. The section containing the work is decentralized (13 editions)
 3. Partly hierarchic structure for the navigation (12 editions)
 4. Hierarchic structure for the navigation (2 editions)

- *Linking from the edited work to annotations/versions*
 1. No internal links from the work to annotation/versions (3 editions)
 2. Links pointing to new page (12 editions)
 3. Links pointing to pop-up window (5 editions)
 4. Links pointing to another frame (5 editions)
 5. Combinations (6 editions)
- *Number of works/versions in the editions*
 1. One manifestation of one work in its whole (5 editions)
 2. Two or several manifestations of one work in its whole (12 editions)
 3. A number of works, each with one manifestation (3 editions)
 4. A number of works, each with two or several manifestations (5 editions)
 5. Combinations – one work through one manifestation, another through several manifestations (6 editions)
- *Related material inside the edition*
 1. The edition contains little or none related/surrounding material. (9 editions)
 2. The edition contains extensive related/surrounding material. (22 editions)
- *Related material outside the edition*
 1. No referring to related material outside the edition (3 editions)
 2. External links to other resources on the Web (6 editions)
 3. References to related material in other media (1 edition)
 4. References/links to related material in other media and on the Web (21 editions)

The overall impression of hypertextuality concerning the aspects of the navigation system, the internal linking within the manifestations to other versions and annotations, and the size of the edition was not uniform (see App. 1 tables 1A, 1B). No evident correlation between the three aspects within respective edition could be found. However, when looking at each separate aspect of hypertextuality in all the editions, clear tendencies were observed.

A majority of the 31 editions could be characterized as having either a partly decentralized or partly hierarchic structure for the navigation. The first half refers to editions where the reader can navigate freely through the manifestations of the work by having access to the different chapters, pages or versions through links. Usually this is accommodated by a consistently accompanying list of contents. In the other half the navigation is more predetermined and linear. From the page with the manifestation e.g., there are only links to previous and/or next page/chapter. If one wishes to read in a different order, one has to return to a hierarchically superordinate page to choose other entries. In only a few editions a completely free navigation could be said to be facilitated throughout the whole edition. Even fewer editions implement a fully predetermined navigation, in which one e.g. can find oneself in a locked position without links back or forward.

We also found that nearly half of the editions could be said to have a low level of integration concerning the internal linking to versions and annotations. This category contained editions where the reader is taken to a different page when she activates a link to, say, a word explanation. The other half consisted of editions where the reader, using frames or pop-up windows, can simultaneously view parallel versions or annotations to a text.

As to the size of the editions, there were large variations concerning the number of works/versions, related material within the edition and references to related material outside the edition. Some cross-section observations could be noted though. 16 editions contained more than one manifestation of a work, had contextual material within the edition and were also a part of a larger network by external links to related material in other web resources. Among these editions the largest category (6 editions) contained a work in two or more versions, had a large amount of material within the edition and had references/links both to related material on the Web and in other media. A majority of the editions could hence be characterized as being *archives*, containing a large amount of material and being part of a larger network of texts on the Web.

*Interactivity**Studied variables and categories found*

- *Types of manifestations*
 1. Transcription and facsimile (3 editions, one of them allowed parallel readings)
 2. Transcription, facsimile and commentary (5 editions, two of them allowed parallel readings)
 3. Annotated manifestation (12 editions, none of them allowed parallel readings)
 4. Annotated manifestation and different translations (6 editions, four of them allowed parallel readings)
 5. Annotated manifestation and facsimile (2 editions, one of them allowed parallel readings)
 6. Others (3 editions, one of them allowed parallel readings)
- *Possibilities to search*
 1. No (10 editions)
 2. Yes (21 editions)
- *Possibilities to react/discuss*
 1. No (27 editions)
 2. Yes (4 editions)

The following observations were made on the user's choice of version and the possibility to manipulate the physical appearance of the text on screen. 8 editions contained only one manifestation, the rest two or several (see category 1 and 3 at "Number of works/versions in the editions"). Hence, in a majority of the editions the reader could choose between at least two versions of the same work. There were several different kinds of manifestations; annotated texts, facsimiles and manifestations expressing different languages and linguistic usage. The most frequent type of manifestation was without doubt the annotated manifestation, often accompanied by other versions as translations and facsimiles.

22 editions did not offer the possibility to compare versions through parallel readings, and only a few editions allowed the user to affect the screen presentation of the text, for example by enlarging or diminishing

facsimiles or by reading with or without frames. A majority of the editions were searchable, but only a few editions had free discussion possibilities where users can read and leave comments within the edition. Some editions offered closed discussion fora for classes.

Hypermediality

Studied variables and categories found

- *Forms of media*
 1. Only text and few or no pictures (9 editions)
 2. Text and several pictures (6 editions)
 3. Only text and facsimile of the whole work (3 editions)
 4. Text and elements of other media like image, sound or film sequences (8 editions)
 5. Text and facsimile of the whole work and elements of other media like image and sound (5 editions)
- *The roles of media in the editions*
 1. No hypermedial elements, or elements without clear scholarly purpose (3 editions)
 2. Hypermedial elements within the manifestation of the work (19 editions)
 3. Hypermedial elements only in the surrounding material (9 editions)

Regarding the different forms of media incorporated in the editions, there were large variations, ranging from editions consisting of mere text to those containing other forms of media such as images, film and sound. In a majority of the editions the forms of media were integrated with the text of the manifestation. A clear majority had hypermedial elements either in the manifestations or in the surrounding material with the purpose of illustrating the events of the literary work, its adaptations to different media or the contemporary context of the work/author. But only 11 editions had incorporated forms of media that a printed edition cannot integrate, i.e. sound and moving pictures. Among these only two illustrated the work in question with text and sound presented in an integrated way.

Editions in theory vs. practice

Do the examined features correspond to theories and guidelines of how an electronic scholarly edition ought to be designed in order to generate an added value from a scholarly point of view? Can the editions be said to entail a radically new mediality, or do they only reproduce the features of the printed medium? These questions will be discussed in the following.

*Hypertextuality**Navigation system*

Shillingsburg argues that the navigation system must be designed so that the users are aware of their location within the site and a way back to the previous page/section is offered (1996, 35). Hockey also stresses having a distinctly devised framework for the navigation so that the user is not lost in a large amount of material (2000, 132f.). The idea that a center is created at the specific location of the user can also be traced to the design of the navigation system. If a free navigation is accommodated, the order of the reading is not predetermined (Landow 1997, ch. 1-2).

Only editions with a completely decentralized structure for the navigation can be said to realize these thoughts in our study. In other words a minority of the 31 editions. In most of the editions a completely free navigation throughout the edition as a whole was prohibited and instead the reading became more predetermined. In a minority of the editions as well, the reader risked finding herself in a locked position; usually paths were offered back or forward.

Internal linking

There are also some thoughts among the theorists about how the internal linking of the manifestations to annotations and other versions should be designed to enhance added value. The main idea is to use the linking to display relations between and within texts and also at the same time provide immediate access to it in a flexible way (Siemens 1998, par 15; Lavagnino 1995, pars. 11-13). This means, according to McGann (1997, 18f.), that the complexity of literary works can be handled. Shillingsburg (1996, 33f.) argues that annotations and differing versions be displayed

in different windows, while most theorists do not take side as to particular technical solutions. We decided to investigate this by studying to what the reader has simultaneous access on the same page.

In our study the largest category appeared as editions displaying annotations and other versions on new separate pages. This means that one text at a time has to be at the center, that annotations are to be viewed separately and that comparing two or several texts are more difficult than it would have been by parallel displays. On the other hand, there were also several editions which realized a more flexible reading by the use of pop-up windows and frames.

Size of the editions

The impact that hypertextual linking can have on the size of the editions has been discussed by several theorists. Linking within the manifestations to all the material that the edition can contain gives the reader a text in its whole context, i.e. a reader has immediate access to the referred material in question (Lavagnino 1995, par. 2; Landow 1997, 3f.) The MLA guidelines argue for this to be exploited by electronic scholarly editions, and that already existing related material on the Web ought to be linked to (1997, sec. IV). Shillingsburg states the same in a more enthusiastic way: the edition should grow into an archive with different versions, contextual material, critical essays and bibliographies (1996, 24). Lavagnino (1995, pars. 11-13) and McGann (1996b, pars. 28-29) outline similar thoughts on the capability of an electronic edition to present a work with all its different versions and its readiness to include new and additional material. In McGann's view, the electronic editions are hence dynamic and transformative, and can correspond to the cumulative nature of scholarship (ib.)

In our study a majority of the 31 editions were found to have realized this extension towards archives, becoming parts of a larger network of texts on the Web. Most of the editions contained comprehensive material that placed the work or the author in its context and provided access to related material in other web resources. Concerning the capability to encompass multiple versions, a majority of the editions did contain more than one manifestation of a work but only a few presented a larger number of versions of the same work. The idea of an edition

containing a work with all its different versions had not been realized to any larger extent among the studied editions. It is difficult to say if the editors are planning to add more versions, and if the editions are thus to be viewed as dynamic and growing. A few of the editions declared that they were cumulative, while a majority had no statement of this.

Interactivity

Types of manifestations, parallel readings and ways to manipulate the screen presentation

To Price-Wilkin, the edition takes form and is defined through the user's preferences (1994, sec. 4.1). In this way, an edition can take on the form of a critical edition to some users and a facsimile edition to others, while to yet other users it is an uncommented text. Hence, the user's choice determines what to present and how to present it.

In our study, a majority of the editions offered readers the possibility to choose between at least two versions of the same work. But the ability to present several different kinds of manifestation types to meet more diverse user needs and interests could not be said to be fully exploited. Since our study was not a user study, we could not make statements about potential interests and needs of readers. However, enhanced manifestation variation and manipulation of the textual presentation ought to accommodate a more heterogeneous audience. Taken into consideration that we used the concept of version in a very broad way, covering all the different ways of presenting a text, the editions could be expected to display a more diverse composition of manifestations. A majority of the editions did not provide the opportunity to perform parallel readings of different versions, and the possibilities to influence the presentation on the screen were limited. In only a few editions the reader could enlarge/diminish images and choose between reading with or without frames. Hence, the thought of an edition containing all the different versions of a literary work that can be studied through for example parallel readings and also offering the reader the capability of manipulating the way the text should be presented, was not found to be realized in the editions we studied.

An issue neglected by the theorists who focus on possibilities is that apart from its potential to enhance reader interactivity with the material,

the electronic edition can also make interaction more difficult in comparison to a printed one. In a printed edition it is impossible to prevent the user from reading in the order he or she chooses, to underline passages or even to tear out the pages. In an electronic edition the editors can force the user to read in an established order and also prevent the reader from marking or copying text. An electronic edition can therefore be more constraining than a printed edition. Our study found that the possibilities for the reader to influence the text were very limited.

Search capabilities and user comments

Our study also covered the possibilities to search and discuss in the editions. Through search capabilities the users are given the chance to look for a specific concept of interest and then be taken to a relevant passage thus choosing their own entrances to the material. Furthermore, through discussion fora they have the opportunity to participate in the scholarly communication. Both Shillingsburg (1996, 33f.) and the guidelines by the MLA (1997, sec IV) express the opinion that the users ought to be able to leave their own comments within the edition and to read other users' comments. Landow also mentions this in his view of the fundamentally new role for readers in which they can assume the role of the author by reacting and commenting on the material and having this published within the edition (1997, ch. 1-2).

Among the examined editions only a few provided the possibility to read and leave user comments within the edition. The majority of the editions only offered an e-mail address through which a contact can be established. The distance between editor and reader was in this way maintained. In most of the editions the reader could search for words or phrases and be immediately connected to the corresponding passages, or study term frequency in the literary work or in the edition as a whole.

Hypermediality

Hypermedial elements and their function

A printed edition can only contain and provide access to text and illustrations, whereas the electronic edition has the capability of being a hypermedial edition. In the MLA guidelines it is emphasized that

appropriate non-textual material ought to be incorporated in the editions to enhance scholarly quality, and they exemplify with facsimiles, illustrations and recitations (1997, sec. I.D.1). Hence the adaptations of the work to different media can be incorporated. Shillingsburg also means that text, image, sound and color should be integrated in the electronic scholarly edition (1996, 33f.).

With few exceptions, hypermedial elements were found in the examined editions. We came across recitations, illustrations, facsimiles, maps, and music and film sequences. These were partly used in the contextual material and partly connected to the manifestations. The editions could be characterized as hypermedial in the sense that they integrated text with other forms of media through the use of links. But few editions integrated forms of media that a printed edition cannot handle, i.e. sound and moving pictures. In most of the editions there were hypermedial elements with no clear scholarly purpose, for example uncommented images. These seemed to serve mainly aesthetic purposes, or simply because the technology allows it.

Revolution or remediation?

The essential differences among the editions, even if they as a group displayed evident tendencies, call for further elaboration. The editors' awareness concerning the choice of publication medium was seen as a possible explanation to the various designs. In some editions no explicit reasons were given for making the edition electronic, while others had detailed discussions about the advantages of launching the edition in electronic form. Furthermore, some of the editions were edited by the same persons that outline the added values in the theoretic literature. It can be expected that the outspoken value-adding theories of the editors and their beliefs in the medium's potential are realized in such editions, it can even be described as self-fulfilling prophecies. However, the focus on the realization of one specific value can blind editors to other potentials of the medium. It can even lead to the negligence of important issues. This can be exemplified by the *Rossetti Archive* and its aspiration as a research tool with digitized images of every manuscript, proof, printed text, painting, and drawing by Dante Gabriel Rossetti (McGann 1997, 19-46). But the transcriptions of the poems and prose by Rossetti

are presented in long files with a rather predetermined and hierarchic navigation order. This might confuse the readers as to their location within the web site, indicating that little effort was made when designing the navigation system.

Editorial design obviously corresponds to the varying purposes of the editions. But a deliberate choice of medium for publication and an implied awareness of its benefits do not automatically mean that the editors follow the guidelines by the Modern Language Association or theories outlining the added value. An awareness of the medium does not have to be expressed in the editions but can exist anyway. This made it difficult to examine if and how an awareness of the medium influenced the design of the editions. Among the editions that expressed thoughts about the employed medium and how it can be utilized, several chains of thought that we presented in our theoretical framework were found in editorial purpose statements:

- They wanted to exploit the advantages with the computer and the Internet (Twain; Dante, *Digital Dante*)
- They wanted to see the edition grow into an archive (Blake)
- They wanted to accommodate different user needs and interests (Dante, *World of Dante*)
- They wanted to exceed the limits imposed on the printed editions and make use of the inherent flexibility of the electronic media (Marlowe)
- They referred directly to Landow and his views on hypertext and hypermedia (Boccaccio)
- They referred to the MLA (Shakespeare)
- They wanted to experiment with the interactive medium that the Web constitutes (Gray)
- They referred to Lavagnino and McGann (all the editions within the *Romantic Circles* project)

There are more examples. Obviously the editors were conscious of the benefits of the employed medium, but this was not manifest in the construction of all these editions.

Another explanation for the varying design among the editions was that some of them were created as early as 1994 and had not been updated since, while others were actively maintained. Early and not updated editions can be expected to have less exclusive technical features. Since programs and technical devices are developing rapidly, it is obvious that the earlier editions did not have the same opportunities at the time of their creation as the later editions do. The designs of the editions were not systematically related to their maintenance in our study, but we found examples that do seem to support this line of reasoning. The edition of Mary Robinson's *Sappho and Phaon* e.g. did not appear to have been updated since its creation in 1994 and could not be said to utilize the value-adding aspects of the features.

It is evident that the medium has an impact on the message, on what can be said and how it is to be said, but this does not mean that electronic editions automatically inherit an added value compared to printed ones. Our empirical study demonstrated an obvious gap between theory and praxis. The value-adding aspects of hypertextuality, interactivity and hypermediality existed only on a limited scale and were not realized to their full potential in the editions examined. The opportunities and the potential so well spoken of by theorists like McGann and Lavagnino seemed difficult to bring to fruition in the editions. Idealizing discussions were held about a scholarly revolution that neither seems to exist nor lie in the near future. In their optimistic eagerness, the theorists seemed to forget or ignore problems and limitations particular to the new medium. In this context Bolter's notion of "remediation" appears to be significant (2000, 23). The electronic editions were viewed as being better than the printed, but in practice they were not so revolutionary. Instead they incorporated the features of the printed medium to a large extent, meaning that the editions exhibited one or two versions of a work, a predetermined order for the reading and little possibility to manipulate how the text should be presented on the screen. Furthermore, only on a small scale did they integrate forms of media that the printed medium cannot contain. The presence of the printed medium could also be noticed by direct references to related printed resources. Hence the editions in our study were neither found to be free from the features of the printed medium nor to express a new mediality.

The added values that we did find realized in the editions were that they contained a large amount of material and that they expressed relations between and within texts through the use of links while at the same time providing immediate access to all this. We return to Hockey's statement that much of the interest in electronic full-text publishing stems from the ease of making material available to many people at the same time (2000, 3), while other value-adding features of the Web are not noticed to the same extent.

Since all of the editions in our study were freely accessible on the Web, all of them can be said to have an added value with regard to the distribution possibilities compared to printed and often expensive editions. The ability of the medium to improve accessibility is a clear advantage in relation to the printed medium and does not fit within the notion of remediation. However, other ways to restrict the accessibility can be employed, for example by the use of password demands. Also, one should not forget that a large number of people do not have access to computers at all, thus not to the electronic editions.

The possibility to express relations between and within texts by the use of hypertext is indeed an added value that was observed. However, the reader should also be able to read the text without hyperlinks. The implicit nature of intertextuality should not be replaced by the explicitness of hypertextuality. Several of the examined editions did offer the reader to read the text both with and without annotations, for example *C.J.L. Almqvist: Collected Works*. Nevertheless, editions that contained only an annotated hypertextual version of the work were observed. In these, references to for instance other texts are explicit, and may be marked blue and linked to an explanation. Thus, the independent value of analysis and in-depth reading falls short.

A surprisingly small number of the editions exploited the capabilities of the medium for interaction. This concerns above all the possibilities for interactive discussion. The specific feature of interactivity seemed to be the most difficult one to define in a concrete way. Aarseth's description of the current use of the concept is revealing: "various vague ideas of computer screens, user freedom and personalized media" (1997, 48).

There were obvious exceptions, editions where the ability of the medium to generate an added value from a scholarly point of view was

utilized, for example the flexible managing of multiple versions. This can be exemplified by the *Lyrical Ballads* edition (Coleridge & Wordsworth), where several different versions of the literary work can be viewed through frames to facilitate parallel readings and even a synthesis of all the versions are created, and *The Blake Archive*, where transcriptions and facsimiles are presented in an integrated way. Editions like these make the potential of the medium to generate an added value from a scholarly point of view clearly visible. An electronic edition integrating multiple versions in this way encourages comparisons between versions, without putting one version at the center as being superior of the others, and hence supports critical and associative reading.

Final remarks

In our study we limited the examination and analysis to three features of the Web, which were operationalized into variables and tested on a selection of electronic scholarly editions. Choosing the features of hypertextuality, interactivity and hypermediality, we covered several of the aspects that concerns the design of the editions, that is, we examined the editions from a user interface point of view. A more comprehensive study could examine more and different variables from the same methodological approach, for example issues of markup and transportability. These are factors that relate to the creation and the availability of the editions.

Besides a limited number of features being examined, there were limitations in the selection of the electronic scholarly editions that probably influenced the results. A selection of editions that includes those with payment and password demands, may give results that to a greater extent correspond with the value-adding theories. These editions can be expected to be more thoroughly elaborated and actively maintained since they are directed towards a paying or a specific audience. Further, a more comprehensive study with a larger selection of editions would probably affect the overall view, since our categories were generated from the tendencies observed in this particular study. Since most of the editions can be dynamic and transformative, even the exact same selection of editions might demonstrate different tendencies if the

study were to be repeated another time. This obviously has an effect on the reliability of the study.

Finally, it must be remembered that the questions illuminated by our document analysis might also be studied from other perspectives. Questions regarding the impact that the medium has on the design of the scholarly edition could be examined through e.g. a comparative analysis of a selection of printed and electronic editions. Possible similarities and differences could be easier to discern with this approach. If, how, and to what extent these editions are really used within research and education, and also what design the scholarly community is demanding, are other areas of interest for research in this field. Such issues could be investigated by user studies.

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Appendix 1. The Editions in categories*Table 1A. Hypertextuality*

<i>Edition (by author of the edited work/s)</i>	<i>Navigational structure</i>	<i>Linking to annotations/versions</i>
Addison	3	2
Aikin	1	5
Almqvist	3	2
Beecher-Stowe	3	3
Blake	2	5
Boccaccio	2	2
Chaucer	1	5
Coleridge	3	2
Coleridge & Wordsworth	2	4
Dante, <i>Digital Dante</i>	2	4
Dante, <i>The Divine Comedy</i>	1	5
Dante, <i>The World of Dante</i>	2	3
Dickinson	2	5
Faulkner	2	2
Gray	2	2

Hone	2	2
Landon	1	2
Langhorne	2	4
Marlowe	2	5
Milton	2	4
Peake	3	1
Robinson	4	2
Rossetti	4	1
Shakespeare	3	2
Shelley, M., <i>The Last Man</i>	3	3
Shelley, M., <i>The Mortal Immortal</i>	3	3
Shelley, P. B., <i>The Devil's Walk</i>	3	4
Shelley, P. B., <i>On the Medusa of Leonardo da Vinci</i>	2	2
<i>Snow White</i>	3	2
Swift	3	3
Twain	3	1

Table 1B. Hypertextuality

<i>Edition (by author of the edited work/s)</i>	<i>Number of works/ versions</i>	<i>Material inside the edition</i>	<i>Material outside the edition</i>
Addison	2	1	2
Aikin	2	2	2
Almqvist	3	2	4
Beecher-Stowe	5	2	1
Blake	4	1	4
Boccaccio	2	2	4
Chaucer	2	1	2
Coleridge	3	2	4
Coleridge & Wordsworth	2	1	4
Dante, <i>Digital Dante</i>	5	2	4
Dante, <i>The Divine Comedy</i>	2	2	1
Dante, <i>The World of Dante</i>	1	1	2
Dickinson	4	2	4
Faulkner	2	2	4
Gray	3	2	4
Hone	4	1	2
Landon	2	2	3
Langhorne	2	2	4
Marlowe	4	1	2
Milton	5	1	4
Peake	1	2	4

Robinson	1	1	1
Rossetti	5	2	4
Shakespeare	4	2	4
Shelley, M., <i>The Last Man</i>	5	2	4
Shelley, M., <i>The Mortal Immortal</i>	2	2	4
Shelley, P. B., <i>The Devil's Walk</i>	2	2	4
Shelley, P. B., <i>On the Medusa of Leonardo da Vinci</i>	1	2	4
<i>Snow White</i>	1	2	4
Swift	2	2	4
Twain	5	2	4

Table 2. Interactivity

<i>Edition (by author of the edited work/s)</i>	<i>Types of manifestations</i>	<i>Possibilities to search</i>	<i>Possibilities to react/discuss</i>
Addison	4a	No	No
Aikin	5a	No	No
Almqvist	3a	Yes	No
Beecher-Stowe	1b	Yes	No
Blake	2b	Yes	No
Boccaccio	4a	Yes	No
Chaucer	4b	No	No
Coleridge	3a	No	No
Coleridge & Wordsworth	6b	No	No
Dante, <i>Digital Dante</i>	4b	Yes	No
Dante, <i>The Divine Comedy</i>	4b	Yes	Yes
Dante, <i>The World of Dante</i>	3a	Yes	No
Dickinson	2b	Yes	No
Faulkner	6a	No	No
Gray	3a	Yes	Yes
Hone	2a	Yes	No
Landon	2a	Yes	No
Langhorne	5b	Yes	No
Marlowe	4b	Yes	No
Milton	3a	No	No
Peake	6a	Yes	No

Robinson	3a	No	No
Rossetti	2a	Yes	No
Shakespeare	1a	No	Yes
Shelley, M., <i>The Last Man</i>	3a	Yes	No
Shelley, M., <i>The Mortal Immortal</i>	3a	Yes	No
Shelley, P. B., <i>The Devil's Walk</i>	3a	Yes	No
Shelley, P. B., <i>On the Medusa of Leonardo da Vinci</i>	3a	Yes	Yes
<i>Snow White</i>	3a	No	No
Swift	3a	Yes	No
Twain	1a	Yes	No

a=no parallel readings
b=parallel readings

Table 3. Hypermediality

<i>Edition (by author of the edited works)</i>	<i>Forms of media</i>	<i>The roles of media</i>
Addison	1	1
Aikin	5	2
Almqvist	1	1
Beecher-Stowe	4	3
Blake	3	2
Boccaccio	4	3
Chaucer	4	2
Coleridge	1	1
Coleridge & Wordsworth	3	2
Dante, <i>Digital Dante</i>	4	3
Dante, <i>The Divine Comedy</i>	4	2
Dante, <i>The World of Dante</i>	4	2
Dickinson	5	2
Faulkner	2	2
Gray	2	3
Hone	3	2
Landon	5	2
Langhorne	5	2
Marlowe	1	3
Milton	1	2
Peake	1	3

Robinson	1	2
Rossetti	2	2
Shakespeare	5	2
Shelley, M., <i>The Last Man</i>	4	2
Shelley, M., <i>The Mortal Immortal</i>	2	2
Shelley, P. B., <i>The Devil's Walk</i>	1	3
Shelley, P. B., <i>On the Medusa of Leonardo da Vinci</i>	1	3
<i>Snow White</i>	2	3
Swift	2	2
Twain	4	2

Notes

1. This article is based on our master's thesis (Karlsson & Malm 2002).
2. In library and information science such an approach can be found within bibliographic research, more precisely the area of analytical bibliography. For example, see Williams & Abbott 1999, 9f.
3. In our study we used the concept of *version* to include translations, transcriptions and facsimiles.
4. The editions as a whole did not demand any software for access, but some functions within the editions demanded plug-ins, for example programs to run audio files.
5. This was *C.J.L. Almqvist: Samlade Verk*.
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6. The concept of hypertext was coined during the mid 60's and is often attributed to Theodore Nelson, who considers hypertext to be blocks of text connected through links, which creates several paths through the text and demands the readers to make active choices in their reading. See Nelson 1992, 0/2.

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