

## A Digital Humanities Approach to Narrative Voice in *The Secret Scripture*: Proposing a New Research Method

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### Abstract

This paper is situated within debates surrounding modes of “close” and “distant reading” [Moretti 2000] as they are played out in both the fields of world literature and digital literary studies. It proposes an alternative digital humanities approach to the study of world literature, advocating new methods of close comparative reading rather than the mode of “distant reading” endorsed by Franco Moretti and Alan Liu [Liu 2012]. Specifically, the research method proposed here is focused on a close reading of the novel *The Secret Scripture* (2008) by Irish author Sebastian Barry, with comparative reference to Pat Barker’s well-known war novel *Regeneration* (1997). Through the development and implementation of a digital humanities research method which facilitates new forms of digital literary analysis, we demonstrate that close reading and digital humanities can too be “practicing partners” in a way that serves to advance work in both the fields of world literature and digital literary studies.

## Introduction: World Literature, Distant Reading and the Digital Humanities

Since the publication of Franco Moretti’s controversial essay “Conjectures on World Literature” [Moretti 2000], “distant reading” has become a buzzword among scholars in the literary studies community. Distant reading, understood in opposition to “close reading” is, according to Moretti, a method of analysis which “allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes – or genres and systems” [Moretti 2000, 51]. In tracing patterns as they occur across large corpora of texts, Moretti’s methodology is increasingly dependent on quantitative research methods and data visualization techniques. Owing to the close affinity between Moretti’s distant reading and these methods, Alan Liu has recently suggested that the concept has brought the digital humanities into closer proximity with the traditional humanities discipline of literary studies: “the digital humanities are now what may be called the *practicing partner* of distant reading” [Liu 2012, 492–3]. Interestingly, however, few literary scholars have acknowledged or addressed the digital humanities methodologies underlying Moretti’s concept.<sup>[1]</sup> Similarly, few digital humanists consider distant reading within the context it was first proposed, namely, within the field of world literature. Subsequently we find that while members within both the literary and the digital humanities communities are purportedly addressing the same concept, they are doing so in quite different ways and from still divergent standpoints.

This paper aims to bring together the two strands of these debates and by doing so to advance current understandings of the relationship between digital humanities and the literary practices of distant and close reading — the latter practice, we argue, being too quickly jettisoned within recent studies. Taking a work of contemporary Irish fiction, *The Secret Scripture* [Barry 2008], as a case study, we describe the evolution and implementation of an innovative new research method, incorporating digital humanities and traditional literary methodologies which enable an enhanced form of close reading of the novel within a world literature framework. Situating our research within the debate between modes of close and distant reading, we focus on what Moretti has identified as the element of literary texts for which modes of distant reading are unable to account, i.e. “local narrative voice” [Moretti 2000]. We describe the development

and implementation of a digital humanities tool and methodology which support a close reading of this particular textual feature within a comparative framework. In its second iteration, the software is expanded to include the input of multiple literary scholars as they engage with the text. In concluding, we argue that the digital humanities approach endorsed in our case study shows that close reading and digital humanities can too be “practicing partners” [Liu 2012, 493] in a way that serves to advance work in both the fields of world literature and digital literary studies.

## Distant Reading and World Literature

In the field of literary studies, the methodological debates regarding close and distant readings have become inescapably intertwined with questions as to the relative status of national and world literatures respectively. In “Conjectures on World Literature”, Moretti takes issue with the tendency in literary scholarship to study literature within national contexts only and to endorse practices of close reading which he describes as the “very solemn treatment of very few texts taken very seriously” [Moretti 2000, 57]. Against such limited approaches to the diverse and vast field of the world’s literature, Moretti maintains that the main goal of distant reading and of world literature is to provide a “thorn in the side, a permanent intellectual challenge to national literatures” [Moretti 2000, 68]. Distant reading, according to Moretti, “allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes — or genres and systems” [Moretti 2000, 57] and, in so doing, to comprehend the literary system as a whole rather than as it manifests in national contexts only.

In *What is World Literature?* (2003), David Damrosch, another leading figure in the world literature debate, establishes the labels “specialist” and “generalist” readings to distinguish between national and global approaches to literary scholarship respectively. The term “specialist” refers to an approach or an individual concerned with studying literary works within their culture of origins and national literary tradition; practitioners endorsing specialist methodologies are characterized by a concern with close textual reading and the endorsement of modes of microcriticism. Conversely, “generalist” refers to approaches characterized by a “high level of cultural abstraction” [Damrosch 2003b, 329] and a refusal to engage with the specificities of individual literary works or their place within a specific national literature. In recent years, the generalist approach has become most readily identified with Moretti’s mode of “distant reading.”

However, even within Moretti’s arguments for extending analysis beyond the confines of national literature, the necessity for a specialist, local knowledge is occasionally acknowledged. In “Conjectures on World Literature,” he concedes that “the narrator’s voice” is the “key variable element” that disrupts a distant or generalist approach to literature [Moretti 2000, 65–6]. As the embodiment of “local form” through “local narrative voice,” “the narrator is the pole of comment, of explanation, of evaluation” [Moretti 2000, 66]; when “foreign ‘formal patterns’ (or actual foreign presence, for that matter) make characters behave in strange ways [...] then of course comment becomes uneasy — garrulous, erratic, rudderless” [Moretti 2000, 66]. Tellingly, it is at this point — that of “local narrative voice” — that the generalist must yield to the specialist’s knowledge and methods of close reading in order to make sense of the “erratic” comment that the local narrator relays.

Having called attention to both the potential value and the limitations of both generalist and specialist approaches, Damrosch notes that the key challenge facing scholars concerned with the study of world literature is the establishment of a methodology which enables the researcher to “mediate between broad, but often reductive, overviews and intensive, but often atomistic, close readings” [Damrosch 2003a, 26]. The solution he proposes is that world literature can best be read by combining both specialist and generalist approaches: rather than adapting the role of either generalist or specialist in the study of world literature, Damrosch suggests it is more useful to endorse a both / and approach. He points out that when our purpose is not to delve into a culture in detail, “the reader and even the work itself may benefit from being spared the full force of our local knowledge,” and that the generalist “will find much of the specialist’s information about the work’s origins is no longer relevant and not only can be but should be set aside” [Damrosch 2003c, 517]. Conversely, the specialist’s knowledge serves as the major safeguard against the generalist’s “own will to power over texts that otherwise become all too easily grist for the mill of a preformed historical argument or theoretical system” [Damrosch 2003c]. Hence Damrosch argues that “systemic approaches need to be counter balanced with close attention to particular languages and specific texts” [Damrosch 2003a, 26] which will enable the generalist to understand the work effectively in its new cultural and theoretical context while at the same time having a

## Digital Humanities Methodologies and Modes of Readings

Damrosch's aspirations for a combined generalist/specialist methodology have a particular, though as yet largely unacknowledged, relevance for newly emerging digital humanities literary methodologies. Instead, Moretti's terms have tended to dominate the field and in recent years a growing number of works in digital literary studies have explicitly endorsed modes of distant reading [Clement 2008] [Wilkens 2012]. The most common strategy has been to analyze large corpora of texts in order to identify patterns as they occur within the wider literary field, and thus to move literary studies beyond the confines of literary canons [Moretti 2005], [Wilkens 2012], [Heuser 2011]. Conversely, Tanya Clement has employed text mining and data visualization techniques to enable a reading of an individual text, Gertrude Stein's *The Making of Americans*, "from a distance" [Clement 2008, 361]. In most instances, however, the formal features of the text or texts under examination are read at a remove from the cultural context in which they are either produced or read.

In his article "Where is Cultural Criticism in the Digital Humanities?", Alan Liu has termed the lack of engagement with cultural criticism as a key "deficit" for digital humanities. In this scenario, distant reading — understood as a "catch-all" for long-established "cultural-critical methods" — becomes the post-Cold War savior and the means to break an earlier formalist-culturalist détente: "Sophisticated digital humanities methods that require explicit programmatic instructions and metadata schema now take the ground of elemental practice previously occupied by equally sophisticated but tacit close reading methods" [Liu 2012, 493–4]. For Liu, the contrast in new practice is so "stark" as to change "the very nature of the ground being fought over: the text" as "block quotations serving as a middle ground for fluid movement between close and distant reading are disappearing from view," and are increasingly replaced as "objects of sustained focus" by "data visualizations of large patterns" [Liu 2012, 494]. While Liu's arguments concerning cultural criticism have a compelling and mobilizing force, his jettisoning of close reading and of block quotations as subjects of enquiry for digital humanities is, in our view, premature. Nor, as this paper will show, need a partnership of close reading and digital humanities, informed by recent developments in world literature, operate in isolation from "cultural-critical" methods.

## Case Study: Local Narrative Voice in *The Secret Scripture*

The subject of this case study, Sebastian Barry's 2008 novel *The Secret Scripture*, is set in present-day Ireland and tells the story of the 100-year old Roseanne Clear who was incarcerated in the Sligo Mental Asylum at some point during the mid-twentieth century. The story is relayed through a double narrative: the personal recollections of Roseanne relayed in her "Testimony of Herself" and the observations made by her psychiatrist, Dr. Grene, in his own investigation into Roseanne's admittance into the hospital, which are recorded in his "Commonplace Book." Although the novel shifts between the first-person narratives of Roseanne and that of Dr. Grene, Roseanne's voice is the more prominent of the two throughout the novel.

While *The Secret Scripture* has enjoyed a very positive reception and a number of literary awards, some divergence exists among critics in their evaluation of the efficacy of the narrative voice. For many critics and readers, Roseanne's voice is what renders the story being recounted so powerful. Writing for *The Daily Telegraph*, David Robson goes so far as to argue that in Roseanne Clear, Barry has "created one of the most memorable narrators in recent fiction" [Robson 2008]. Robson's claim was echoed by Matthew Parris, chair of the 2008 Costa Book Award judging panel, who argues that in Roseanne, "Sebastian Barry has created one of the great narrative voices in contemporary fiction" (Parris quoted in *The Daily Telegraph*, 2 May 2008). However, curiously, and as recorded by the *Independent Arts* Correspondent on 28 January 2009, the judges awarded the prize to Barry in spite of their explicit acknowledgement that the book was "flawed in many ways." The strongest criticism was generated by the novel's ending while another critique centred on the "voice" of Dr. Grene. For Parris, "it was the narrative strength of the central character, Roseanne, which helped Barry triumph.... In Roseanne, a narrator had been created that is so transcendent that it redeems all of the structural weaknesses of the book" (*Independent*, 28 January 2009).

However, Barry's use of Roseanne as first-person narrator has also generated strong critical scepticism regarding the credibility of her voice. Writer Adam Roberts takes issue with the plausibility of the prose allocated to Roseanne, arguing that

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I've only known one 100-year old, and she hardly spoke at all. Most centurions, I'd wager, limit themselves to "pardon?" and "the nurses are stealing my clothes," and few if any are capable of eloquence like this: "There was a black river that flowed through the town, and if it had no grace for the mortal beings, it did for swans and many swans resorted there, and even rode the river like some kind of plunging animals, in floods. (*The Valve*, 29 September 2008)"

In *The New Statesman*, Robert Hanks also questions the success of the narrative voice on account of "Barry's failure to give his two narrators sufficiently distinct voices" [Hanks 2008]. According to Hanks, Dr Grene was educated in England, and at one point says that nobody could mistake him for an Irishman, whereas he is at times almost stage Irish. The book is also marred by a self-consciously literary quality, manifested in Roseanne's improbable attachment to Sir Thomas Browne's *Religio Medici* and the predictable unreliability of the narrators [Hanks 2008].

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A second and related significant thread within critical reception of the novel is its status as "national narrative." While Roseanne's narrative relays a subjective account of her own personal history, numerous critics have noted the conflation between personal history and Irish history that occurs in *The Secret Scripture*. Anna Leach calls attention to the fact that "as the country of Ireland, or Éire, is often represented as a woman, it is not difficult to see parallels between the plight of Roseanne, beautiful and abused, and the plight of the country" [Leach 2008]. Writing for *The New York Times*, Art Winslow notes that in *The Secret Scripture*, "personal fate and national fate are incestuously bound" (16 January 2009). And according to the publishing blurb circulated by publisher Faber and Faber, "Roseanne's story becomes an alternative, secret, history of Ireland" (faberandfaber.co.uk, 2008).

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The extent, however, to which Barry has been successful in combining personal history with national history has also produced disagreement among critics and readers. For Leach, Roseanne's story is at times "rendered more symbolic than human," which she sees as ultimately weakening the credibility of Barry's plot [Leach 2008]. Similarly, Deborah Cameron, writing for ABC Sydney, also questions the degree to which Barry successfully portrays both a personal and a national narrative through Roseanne's first-person narrative: she asks whether Roseanne "live[s] and breathe[s] as an independent character" or if she is "a puppet, jerked around to illustrate various events from Ireland's past" [Cameron 2009]. Underlying this particular issue is a suggestive and significant debate regarding the novel's attempt to convey both a personal and national trauma, not only as a historical event but one of acute relevance to contemporary Ireland.

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## Introduction to Digital Humanities Research Method

The case study constructed by this paper is thus shaped by the analytic crossover of current debates in digital humanities and world literature regarding modes of reading (close and distant) and interpretative approaches (general and specialist). Owing to the debates surrounding narrative technique in *The Secret Scripture* and its status as a national novel, it provides an interesting case study for examining how the formal feature of "narrative voice" employed by the author affects the content of the novel and its reception. This literary enquiry informs our specialist approach and the construction of a related digital humanities methodology.

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In order to move our analysis of *The Secret Scripture* beyond an Irish context and tradition, following Damrosch, we employ a comparative approach [Damrosch 2003b, 329]. As Damrosch notes, "to be effective, a comparison of disparate works needs to be grounded in some third term or set of concerns that can provide a common basis for analysis" [Damrosch 2009, 46]. Specifically, we include a comparison of Barry's work to Pat Barker's well-known novel, *Regeneration* (1995) as a narrative also structured around the dialogical relationship of patient and therapist. Set in Britain in the early twentieth century, *Regeneration* is based on the real-life experiences of British army officers being treated for shell shock during World War I at Craiglockhart War Hospital in Edinburgh. Its narrative relays the treatment of soldiers suffering mental breakdown and is shaped predominantly around the discussions which the psychiatrist Dr. Rivers has with a number of patients within the asylum in which he works, most notably those with the war poet, Siegfried Sassoon. In narratological terms, Barker's novel utilizes the narrative technique of "free-indirect discourse,"

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which shifts between various characters' perspectives throughout and which facilitates an especially complex and layered narrative. Thus, like *The Secret Scripture*, *Regeneration* provides an account of an individual trauma which is also intimately related to a wider historical trauma inherent within its culture of origins, and whose successful narrative realisation depends on a subtle use of voice and focalized discourse. Our comparative approach is therefore deliberately situated in and constructed through the specificities of texts — in thematic content and in narrative form — from which contrasts and similarities emerge. In this case study, the two novels under discussion each offer a fictional depiction of personal and cultural trauma, conveyed through extended narrative dialogue, and a key objective is to advance readers' understanding of the complex interoperation of form and theme in these novels.

As an interdisciplinary humanities and computer science team, we conducted a case study that initially sought to develop a digital humanities tool and methodology that enabled a) a close reading of *The Secret Scripture*'s "narrative voice" and b) reading the text through a comparative analysis with Pat Barker's *Regeneration* (1995), again through a focus on narrative voice. In the second stage of the case study, as detailed below, we sought to compare specialist readings of one text — the Irish novel *The Secret Scripture* — in order to provide the literary analyst with additional insight into the work when read within its culture of origins by diverse readers.

Our aim was to develop and implement a digital humanities research method, based on close textual reading of blocks of selected text. Specifically, we chose to pay particular attention to the interrelation of narrative voice and narrative theme, and, within the area of theme, to references to trauma and to cultural context with a view to elucidating not only the text's "generalist" and "specialist" dimensions but, crucially, also their interrelationship. As will be discussed in more detail below, we developed a visualization of the markup of the narrative structure of both *The Secret Scripture* and *Regeneration* to enable the literary analyst in the first instance to (a) identify the degree to which the various characters dominate the dialogue; (b) identify the degree to which the omniscient narrator is utilized in the passages of dialogue between patient and therapist; and (c) identify the degree to which the narrative is autodiegetic. Secondly, the visualization allows the markup of instances of theme, thus significantly extending the existing possibilities of literary annotation and comparative analysis, as will be examined in the next section.

## Digital Humanities Methodologies and Tool Design

Once the literary research question was established, the software tools were designed to support the scholar/analyst in its investigation. The research aimed to investigate the following three elements: 1) narrative structure, 2) trauma and 3) cultural context, by firstly identifying these characteristics within the text, and then examining their relationship to one another. Investigation of the relationships was undertaken with the aid of a visualization tool, designed to render XML-encoded data, and support the practices in comparative analysis.

Initially, an analysis of researcher activities led to four primary use cases providing key design requirements and constraints for the visualization tool, i.e. it should be web-based to support sharing and collaborative viewing or working; it should support simultaneous rendering of XML-encoded narrative for two texts (for example, two encodings of the same text or two encodings of different texts); it should render annotations associated with encoded elements; and it should provide a means for visual overlapping functionality to support inspection of encoding differences and similarities, for example, overlapping encoded segments of cultural and trauma indicators within a single text. The associated XML schema was also derived from these use cases.

Both novels were to be examined for their narrative structure: thus the first phase of encoding utilised a single schema designed for marking the type of narrator being used, e.g. an omniscient narrator, or the deployment of one of the characters as narrator. The narrative techniques employed in both texts are intricate and complex. For example, in *The Secret Scripture*, the auto-diegetic nature of the narrative required a means of distinguishing between when the narrator was narrating or speaking to another character. In *Regeneration* an omniscient narrator sporadically appears, with extensive focalizing through a character's viewpoint. Responding to these challenges, in a reflexive and iterative process, we developed the encoding scheme to include an activity attribute, which was introduced to record whether the narrator was "doing" (i.e. moving, looking away and so forth), "speaking," "thinking," or "narrating." In addition, a "focalizing" activity was further introduced to enable the analyst to indicate when free-indirect discourse was being

employed in Barker's novel. This was deemed a necessary development as, although the omniscient narrator is employed frequently throughout the text, it is most often focalized through the perspective of Dr. Rivers. Hence in order to determine the degree to which a particular character serves as the “pole of comment” within the novel, it was necessary to establish a means of indicating where the narrative is relayed through their perspective. An example of the encoding for narrative structure can be seen in Figure 1, which shows an excerpt from *Regeneration* where Sassoon is discussing hallucinations with his therapist.

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- <p>
- <narrator participant="patient" activity="speaking">
  "No. It happened once during the day. I'd been to my club for lunch, and when I came out I sat on a bench, and . . . I suppose I must have
  nodded off."
</narrator>
<narrator participant="omniscient_narrator"> He was forcing himself to go on. </narrator>
- <narrator participant="patient" activity="speaking">
  "When I woke up, the pavement was covered in corpses. Old ones, new ones, black, green."
</narrator>
<narrator participant="omniscient_narrator"> His mouth twisted. </narrator>
<narrator participant="patient" activity="speaking"> "People were treading on their faces." </narrator>
</p>
- <p>
<narrator participant="omniscient_narrator"> Rivers took a deep breath. </narrator>
<narrator participant="therapist" activity="speaking"> "You say you'd just woken up?" </narrator>
</p>
```

Figure 1.

The second phase of encoding involved marking characteristics of “trauma and cultural context” within the text. One of the aims of the research was to investigate the textual relationship between these two characteristics; as such they were independently marked into the text that had already been marked for narrative structure (as above). This process produced two encodings for each novel. One encoding made explicit the text associated with trauma (see Figure 2), the other encoding made explicit the text associated with cultural context (see Figure 3). The relationship between the two themes could then be compared and contrasted either within a single novel, or each theme could be examined across the two novels. This was achieved by rendering these encodings within the software environment.

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- <p>
- <narrator participant="omniscient_narrator">
  Light from the window behind River's desk fell directly on to Sassoon's face.
</narrator>
- <narrator participant="omniscient_narrator">
  Pale skin, purple shadows under the eyes. Apart from that,
  <trauma type="explicit"> no obvious signs of nervous disorder.</trauma>
- <trauma type="explicit" comment="description of signs common in those suffering from a nervous disorder, specifically, shell-shock">
  No twitches, jerks, blinks, no repeated ducking to avoid a long-exploded shell.
</trauma>
  His hands, doing complicated things with cup, saucer, plate, sandwiches, cake, sugar tongs and spoon, were perfectly steady. Rivers raised his own
  cup to his lips and smiled. One of the nice things about serving afternoon tea to newly arrived patients was that it made so many neurological tests
  redundant.
</narrator>
</p>
```

Figure 2.

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- <p>
- <narrator participant="omniscient_narrator">
  Light from the window behind River's desk fell directly on to Sassoon's face.
</narrator>
- <narrator participant="omniscient_narrator" comment="focalized_through_therapist's_POV">
  Pale skin, purple shadows under the eyes. Apart from that, no obvious signs of nervous disorder. No twitches, jerks, blinks, no repeated ducking to
  avoid a long-exploded shell. His hands, doing complicated things with cup, saucer, plate, sandwiches, cake, sugar tongs and spoon, were perfectly
  steady.
</narrator>
- <narrator participant="omniscient_narrator">
  Rivers raised his own cup to his lips and smiled.
</narrator>
- <narrator participant="omniscient_narrator">
  One of the nice things about
  <cultural_context type="implicit" comment="afternoon tea an activity readily associated with England?"> serving afternoon
  tea</cultural_context>
  to newly arrived patients was that it made so many neurological tests redundant.
</narrator>
</p>
```

Figure 3.

The aforementioned developments are examples of the enhanced attention to the literary conventions and functions of narrative structure demanded by the encoding process. As the act of encoding demanded that the analyst identify and

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name the various narrative techniques employed in the two novels under examination, through this digital humanities process, she was brought into a deeper engagement with the formal features of the texts, thus bringing her to an increased awareness of how the perspectives generated by both novels were constructed and the complexity of their structure.

The process of encoding further served to enhance the analyst's engagement with the manner in which cultural context is made manifest throughout the two novels. In marking the indicators of cultural context, it was discovered that there were various types thereof within the passages. For example, within both novels there are direct references to specific place names, such as Lough Gill in *The Secret Scripture* and Craiglockhart in *Regeneration*. However, there are also less explicit indicators such as the use of colloquialisms within the dialogue. Similarly, when marking up indicators of trauma it emerged that the trauma tag was also being applied to both overt and covert indicators of trauma. For example, in *The Secret Scripture*, Dr. Grene explicitly refers to traumatic events in Roseanne's life, such as her incarceration. Such

indicators are notably different in kind to the silence that the patient displays in

response to Dr. Grene's suggestion of releasing Roseanne back into society [Barry 2008, 78].

As these two types of indicators of cultural context and trauma are not one and the same, it became necessary to distinguish between the various types. Subsequently, "implicit" and "explicit" descriptors were included, and implemented as attributes on the relevant tags in order to allow the encoder to specify the differences between the various types of indicators. Again the process of encoding and the degree of specificity that was permitted by the development of appropriate XML tags brought the analyst into a deeper engagement with how cultural context and trauma are interlinked throughout both *The Secret Scripture* and *Regeneration* (to be discussed in detail under Critical Analysis).

The schema design was undertaken using an iterative design process where a basic design is enhanced over time through engagement with the source and the project collaborators. This well-established approach to data modelling takes cognisance of the hermeneutic spiral created as soon as a source is examined through a certain lens (in this case, for markers of trauma and cultural context), and seeks to account for the expected requirement drift associated with this growing understanding. For instance, through this iterative process, differences emerged as to what the various researchers considered to be indicators of cultural context and trauma and whether they were explicit or implicit. The discussions and debates that ensued brought to light the subjective nature of this interpretative process; thus we considered it useful and necessary to capture the reasoning behind each markup decision. Hence, a "comment" attribute was added to the cultural context and trauma tags to record such content. This form of annotation seemed more appropriate for this research, rather than adopting, or developing a complete annotation system. Furthermore, this approach aligned well with the researcher's modus operandi of simultaneously identifying some indicator and giving a reason, rather than annotating some textual element afterwards which is a different use case.

Visualisation of the encodings was achieved using a custom-designed and developed software tool. The design was driven using standard web-development software engineering techniques and paradigms, for example, use case analysis, iterative design and design patterns. In order to enhance the comparative analysis of the various encodings both within and across texts, we determined that the interface should be divided to contain two scroll panes. This approach would provide the researcher with a method to quickly navigate pairs of XML-encoded documents. Each pane was given an associated dropdown providing the user with a list of available, and uniquely identifiable, encodings. The user can select which novels and which encodings (trauma or cultural context) he/she wishes to compare (Figure 4). The choice of novels and encodings is determined by whether the user wishes to compare the encodings as they appear within an individual text or to conduct a comparative analysis of either cultural context or trauma as they appear in both novels.

The technologies used were XHTML, XML, XSLT and JavaScript, and Perl; all deployed in a client-server architecture. The panels were realised in XHTML. Many of the interactive elements of the tool were realised using JavaScript. The panels used updatable <div> elements that had accompanying JavaScript functions for repositioning, changing the z-



index (overlapping order), and adjusting the transparency of the text background. Both the text and the visual-aid colours and symbols within the panels were generated from the XML encodings using XSLT. When the panels are overlapped in the centre of the page, the backgrounds become transparent in order to view overlapping color-coded markup segments. Transparency management was achieved by manipulating the the z-index of the panels, and the transparency of the panel <div> elements. Both panels also implement co-operative JavaScript scrolling event handlers which, if selected, automatically scroll the other panel if the user is examining the same text (but different encodings) in both panels. The tooltip feature was also custom developed using Javascript.

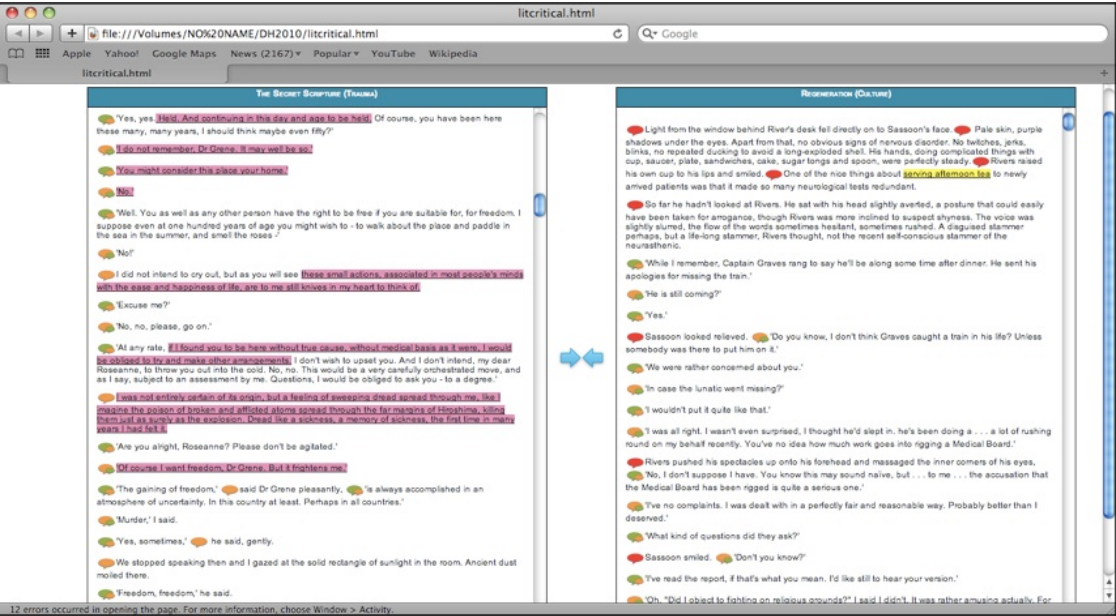


Figure 4.

Colored speech bubbles were deployed to designate the various narrator participants: green for the therapists' speech, orange for the patients' and red for that of the omniscient narrator. When the narrator participants are engaged in dialogue, two overlapping speech bubbles denote this, with the speech bubble of the character that is speaking being the larger of the two. While a user engaging with the software can shift between encodings of cultural context and trauma, the visualisation of the narrative structure in both novels remains permanent (see Figure 5).

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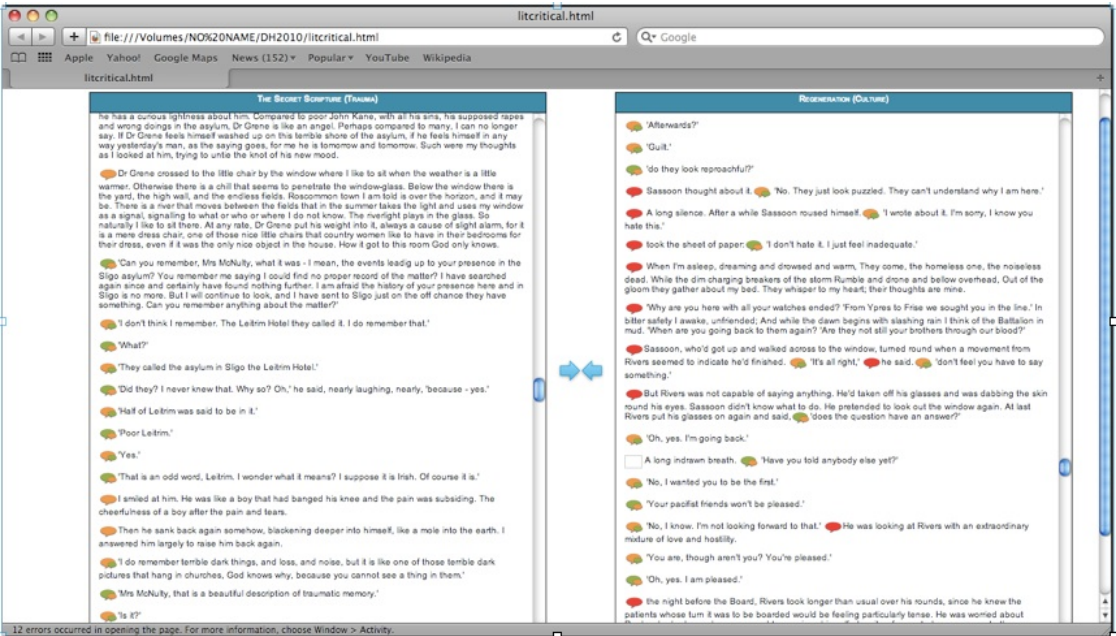


Figure 5.



The segments of text that have been marked up as indicators of cultural context and trauma appear as highlighted text. The sections of text marked as cultural context are highlighted in yellow, and those of trauma in light purple. These colors were chosen since: a) they are easy on the eye; b) they allow the highlighted text to be easily read, and: c) when the two are overlapped, one color does not dominate over the other (see Figure 6.).

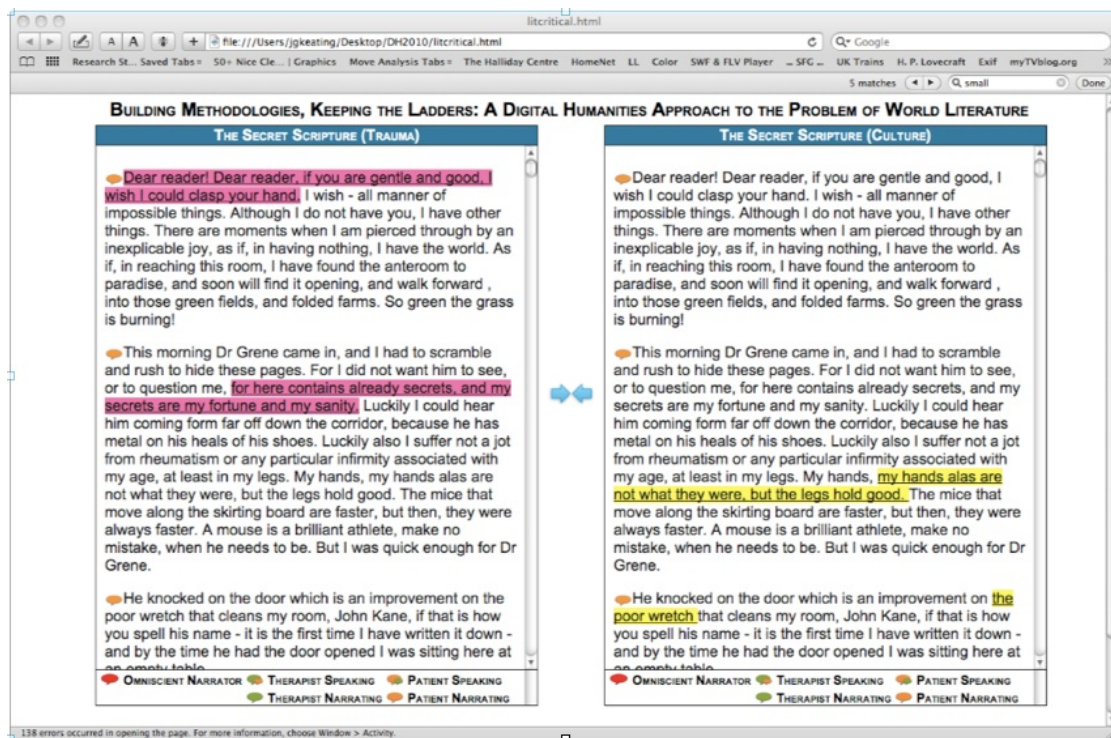


Figure 6.

Using the scroll function, the user can a) compare and contrast the degree to which cultural context and trauma appear within the one text; or b) compare the extent to which markers of cultural context or trauma appear in *The Secret Scripture* or *Regeneration*. The simultaneous scroll function enables the user to examine the respective encodings on a line-by-line basis. The overlap function was designed in order to permit the literary analyst to see where the various forms of encoding overlap. For example, by setting both scroll panes to *The Secret Scripture*, the user can utilize the overlap function to see which segments of texts have been marked as both indicators of cultural context and as trauma (Figure 7). This permits a comparative analysis of two thematic readings of an individual text not possible in codex form.

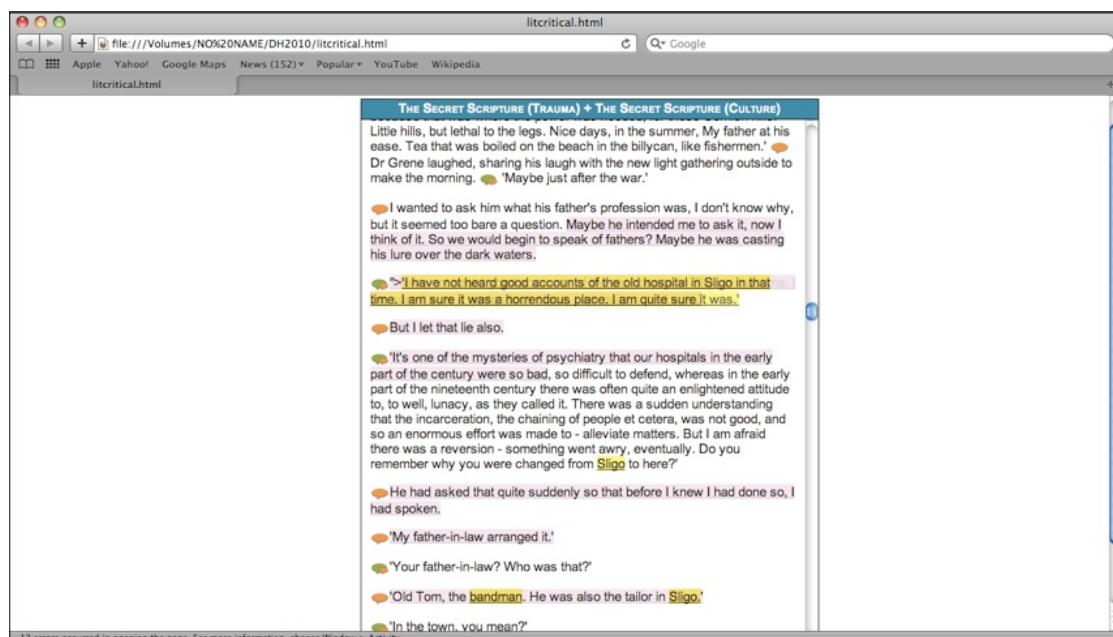


Figure 7.

The comments inserted by the encoder during the mark up process are visualized in a comment box, headed with the name of the user who carried out the encoding (similar to the insert comment function available in modern document processing applications). This box appears when the user places the cursor over any of the highlighted text in any of the encodings of trauma or cultural context in either *The Secret Scripture* or *Regeneration* (figure 8.). If required, the comments can be utilised in “sticky” manner and remain in view throughout analysis.

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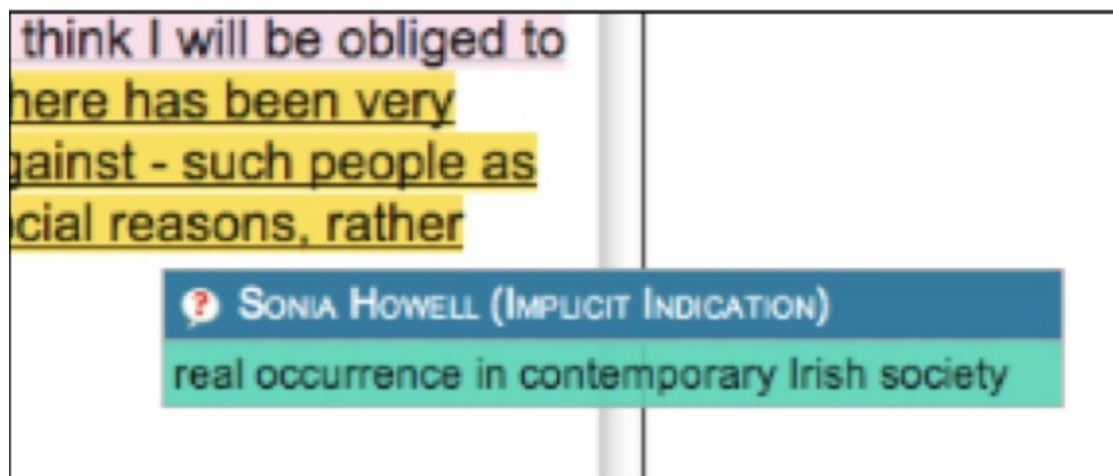


Figure 8.

## Evolution of Research Project

The software was first presented at the Digital Humanities Conference 2010 [Howell, Keating and Kelleher 2010]. At this point, we had determined that a useful further development of the software would be to enable the input of multiple markers. Our future design goal was corroborated by feedback received at the Digital Humanities Conference, where attendees expressed interest in the possibility of having multiple scholars comment on a text or texts. In order to accommodate this evolved research concern, and shortly after its initial dissemination, the software was developed further to include the input of multiple scholars engaging with *The Secret Scripture*. Expanding the commenting functionality, we deployed contributions by nine literary scholars of various nationalities who were asked to mark up the same segment of text from *The Secret Scripture* and to specify the reasoning behind their choice of markup. Having

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collected this data from the various participants, the analyst sought to utilize the software to investigate the degree to which variation or conformity occurred among scholars considered to be specialists in the field of Irish literary studies as they engaged with the text under examination.

The selected participants for this exercise were chosen from the confirmed list of attendees who would be present at the IASIL(The International Association for the Study of Irish Literatures) Conference held in Maynooth in July 2010. In selecting participants from the IASIL attendee list, we consciously limited our sample to specialists in the field of Irish studies as this would ensure an average familiarity with the cultural context in which the text is situated across the respondents. However, while all the participants were specialists in the area of Irish literature, they were of differing nationalities.<sup>[2]</sup> Within this small sample of nine participants, we were interested in establishing how this specialist expertise differed within the interpretative community and how this could be represented by our project.<sup>[3]</sup>

As the participants had limited, if any, experience in XML encoding, they were asked to conduct the exercise using Microsoft Word's highlighting and insert comment features: had we requested that they carry out the exercise in XML, it is unlikely that any of the contributors would have agreed to partake, due to lack of familiarity with the encoding language and the time it would take in order to develop a working knowledge thereof. In the appropriate Word files, the participants were asked to highlight what they considered to be indicators of trauma by setting the highlighter to pink, and to yellow for those of cultural context. They were further asked to utilize the insert comment function on Microsoft Word to specify whether they thought the indicator of trauma or cultural context to be implicit and to provide a brief commentary on their reasoning behind their choice of markup (Figure 9).

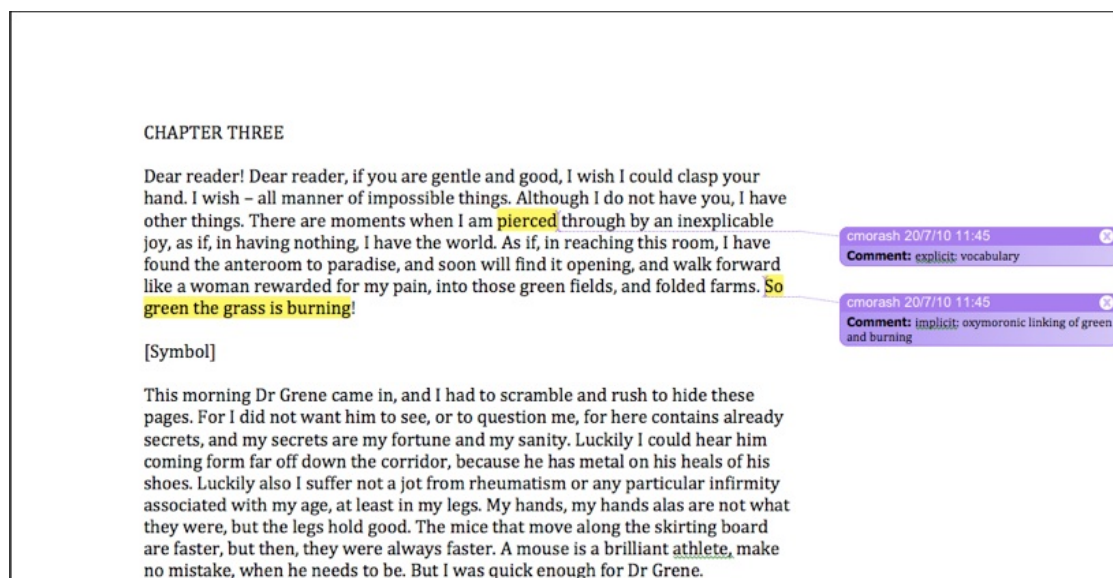


Figure 9.

The completed exercises were examined and then used to XML-encode the plain text in separate XML files, with each participant having provided both a trauma and a cultural context file, thereby allowing the encoded narrative to be visualised using the software tool. As with the encodings of the initial marker, the encodings of the nine participants were realized using yellow to indicate markup of cultural context and pink for that of trauma. No further changes to the visualization software were required other than changing the detail in the dropbox options to reflect the "Author" associated with a particular encoding.

The software and schema development cycle was typical of a digital humanities project in that sometimes the software provided insight into what might be possible (i.e. new use cases) and at other times, new emerging use cases (e.g. following discourse at conferences) prompted changing features in the software. There were also some interesting challenges associated with the actual development, for example, most browsers were unable to dynamically apply XSLT to an XML encoding, and then apply CSS to the resultant XHTML, within a <div> element. This meant that a two-step process was developed, whereby the XSL stylesheets were applied to the encodings and then saved as XHTML in

order to support dynamically changing the encoding of interest in one of the panels. There are other reasonable, and more elegant solutions, of course, and could be easily implemented should a collaborative, larger-scale deployment be required.

## Critical Evaluation

While the original version of the software was developed in order to enhance the comparison of thematic approaches to *The Secret Scripture*, the software as presented at IASIL was concerned with enabling the comparison of various responses by literary scholars to an individual literary work. As the software was presented in two forms, it is necessary to discuss what it enabled in its initial state before proceeding to outline its capabilities when it was expanded to include the contributions of ten literary scholars.

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### Version 1

1. The visualization of the markup of the narrative structure enables
2. the analyst to:
  - a. identify the degree to which the various characters dominate the dialogue.
  - b. identify the degree to which the omniscient narrator is utilized in the passages of dialogue between patient and therapist.
  - c. identify the degree to which the narrative is autodiegetic.
3. As the cultural context and trauma encodings are embedded within that of the narrative structure, the software enables the analyst to identify within whose narrative voice and how frequently the indicators of cultural context and trauma appear.
4. The overlap function enables the analyst to identify the segments of text where indicators of cultural context and trauma co-occur within either of the novels.
5. By setting the panes to either trauma or cultural context, the analyst can visually compare the degree to which they appear in either of the novels.
6. The visualization of the markup also permits the analyst to identify the elements of the text that were not marked as significant indicators of either cultural context or trauma.

### Version 2

1. This version enables the analyst to examine the response of an individual participant to the novel by setting the scroll panes to their encodings of trauma and cultural context.

The analyst may then:

- a) compare either the cultural context or trauma encodings of various participants.
  - b) overlap the various encodings of the participants in order to identify where their respective markup overlaps.
2. The visualization of the commentary by the various encoders provides the analyst with additional information upon which to compare choice of markup along with the rationale provided by each participant.

## Findings

In this study, the analyst was primarily interested in the implications of “narrative voice”; as noted earlier, in the case of *The Secret Scripture* this was a contested aspect in evaluations of the novel and, more generally, an important fault-line for distant and close readings of texts. While some analysis of the respective narrative structures would be possible without the software, the visualization thereof enabled the user to compare more readily the various narrative techniques and, in this case study, some illuminating and dynamic textual features emerged.

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The visualization of the narrative structure in both texts revealed that although the passages selected from the two novels were chosen on the basis that they contained dialogue between the patient and therapist, the amount of

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information that is relayed in conversation between the patient and therapist is notably less in *The Secret Scripture* than in *Regeneration*. This was somewhat surprising as unlike *Regeneration*, an omniscient narrator does not feature in *The Secret Scripture*. However, the visualization of the encoding of the narrative structure also highlights the degree to which *The Secret Scripture* is autodiegetic, whereby Roseanne, the novel's protagonist, narrates the story in which she herself is a character.

The autodiegetic nature of the narrative is significant in that Roseanne, while refusing to dispense much information to Dr. Grene, provides the reader with the details of her story. Hence, the reader becomes the narrator's confidant. This intimate relationship between narrator and reader created through the use of a specific narrative technique calls attention to the powerful function of a local narrative voice within the novel. By visualizing the encodings of cultural context and trauma within those of the novels' narrative structures, the software further enabled the analyst to examine visually how the formal features of narrative, or the "style," interact with the narratological "discourse," that is, with the precise details of the story being told (see [Shen 2008, 136–149]).

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Interestingly, in Version 1 of the software, the segments of texts marked up as indicative of trauma in *The Secret Scripture* appear most frequently either in Dr. Grene's dialogue or within Roseanne's narration, not, as one might expect, in her response to the therapist who questions her on the very matter. The interaction of form and content thus revealed emphasizes Roseanne's unwillingness to voice her trauma. As Roseanne's trauma was due in part to a patriarchal, Irish society denying her a voice with which to assert herself or her rights, the narrative structure directly supports the thematic content of the novel. More generally, it reflects the physical and social silencing of women in Ireland in the early to mid twentieth century and the difficulties in accessing their stories. Here, then, the status of Barry's novel as national narrative is directly related to, and dependent upon, the power of the personal narrative. Our digital method makes visible not only this intricate relationship but further illuminates the subtle effect of Barry's technique; contrary to the views of some critics that his style is "overwritten", it is at crucial times "underwritten" — operating through telling gaps and silences as well as through what is directly expressed.

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Conversely, in *Regeneration*, trauma indicators are distributed more evenly across the discourse between the patient and the therapist and the omniscient narration. However, on closer inspection, one notices that when omniscient narration is employed, it is focalized predominantly through the character of Dr. Rivers due to the author's use of free-indirect discourse. Thus, the indicators of trauma in *Regeneration* are presented more frequently through the therapist's perspective. Once again, a key aspect of Barker's style, and one which has strong thematic significance, is made visible and explicable by our method. It is worth noting in this regard that Barker's use of narrative structure in turn exemplifies the approach to psychotherapy actually employed by the historical Dr. Rivers. As Robert Hemmings has noted:

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Rivers developed a therapeutic treatment based upon the principle of catharsis whereby the patient was encouraged to eschew repressive tendencies and give voice to the traumatic memories [...] without dwelling excessively upon them. Patient and physician would work together to construct from these painful memories a narrative that found some tolerable, or redeeming, even pleasant association for the trauma. [Hemmings 2005, 114]

Utilizing the visualization aspect more extensively, the analyst overlapped the encodings for both novels in order to compare to what extent the traumas depicted in *Regeneration* and *The Secret Scripture* were culturally specific. As both novels are related to events that have caused a "cultural trauma" to the respective nations in which they are set, the analyst expected to discover a significant degree of overlap between the encodings of trauma and cultural context. However, it emerged that the degree of overlap was relatively small. The lack thereof inspired the analyst to re-examine the segments of text marked as cultural context; this was an act of critical self-reflexivity that was made possible by the fact that her encodings had been captured and visualized by the software.

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Of the two novels, the overlap occurred most frequently in *Regeneration*. On closer inspection, the analyst discovered that her criteria for marking cultural context were based predominantly on explicit indicators, such as place names, historical personage and colloquialisms, more readily identifiable when one reads a novel set in a location less immediately familiar to the reader. As *Regeneration* is a more overtly historical novel than *The Secret Scripture*, it

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utilizes factual information more frequently, which could also account for the fact that the analyst marked more indicators of cultural context in Barker's novel than in the Irish text. However, on returning to her markup of *The Secret Scripture*, the analyst noticed that she had failed to encode a number of significant elements of the text that were related to cultural context due to her limited definition of indicators of cultural context. More so than Barker, Sebastian Barry employs a prose style which is "full of gleaming images" (Gatti, *The Times* 1 May 2008) and it is through his creative use of images that he ties his novel more implicitly to an Irish cultural context. For example, Roseanne's references to "salmon" evoke an image that is intimately bound not only to the Irish environment, but also to Irish mythology owing to its associations with stories relating to the Irish Fianna and specifically the legend of the *bradán feasaor* salmon of knowledge. Contrary to the critique cited earlier (that Barry's novel elevates the symbolic over the human), symbolic references are used to suggest layers of psychological insight and, relatedly, psychological damage.

An examination of the encoded responses of more than one analyst is a much more challenging comparative task. In the case of the various participants in *The Secret Scripture* case study (Version 2), the analyst found that a significant consensus occurred across the participants in relation to their selection of moments in the text for markup, and especially so in relation to cultural context. This relative conformity may be partially attributed to the criteria set for the exercise. It may also be due in part to the fact that the contributors were all specialists in the field of Irish studies. While the revelation of consensus was in itself a research benefit, as it provided evidence as to the manner in which literary scholars engage with a text, the general conformity also served to make the differences, and their accompanying rationale, all the more notable.

In the first paragraph of the novel, only two of the six Irish contributors marked any of the text as being indicative of cultural context, while all four of the international participants annotated either specific words or phrases. The majority of those who did mark some text in this paragraph marked words such as "green field"s, and "folded farms," though their reasoning for doing so varied ("rural imagery," "reference to either Flanders or Ireland", "Ireland or Irish related-images," etc). One participant noted that the reference to "green fields" recalled W. B. Yeats's account of "four green fields" in his play *Cathleen Ni Houlihan*. In contrast, only one participant selected the phrase "Dear reader! Dear reader," marking this segment of text as an "implicit" marker of cultural context, which recalls the "gothic of Poe or even Baudelaire."

A notable feature of the annotated markup was its frequent substantiation, and justification, in relation to Irish history and culture. For example, one Irish scholar marked "the transmigration of the soul" as an implicit indicator of cultural context, commenting that:

Much is made of this idea in *Ulysses*: could possibly be an allusion to it. But equally possibly not. Certainly this passage has modernist echoes — the classical and the mundane.

As previously mentioned, another participant situated the text within an Irish literary and cultural tradition by tracing a connection between Sebastian Barry's novel and W. B. Yeats's play, *Cathleen Ni Houlihan*. The impulse to locate the novel within a specific national genealogy — and the related hesitation — is especially telling since it strikingly re-enacts at the "micro-level" of individual readings a central tension within the reception of Barry's work — between those who seek to absorb his writings within a nationalist historiographical tradition, reinforcing the status of a national literature, and those who view his work as presenting a direct challenge to such a unitary national tradition. In addition to visualizing these alternative interpretations, the digital methodology can also illuminate the manner in which the text facilitates, and even invites, both such readings. For example, Figure 10 displays how the references to World War Two, marked by a number of participants as indicating an internationally "shared history," appear in close proximity to the brief textual discussion of the struggle for liberation in Ireland.



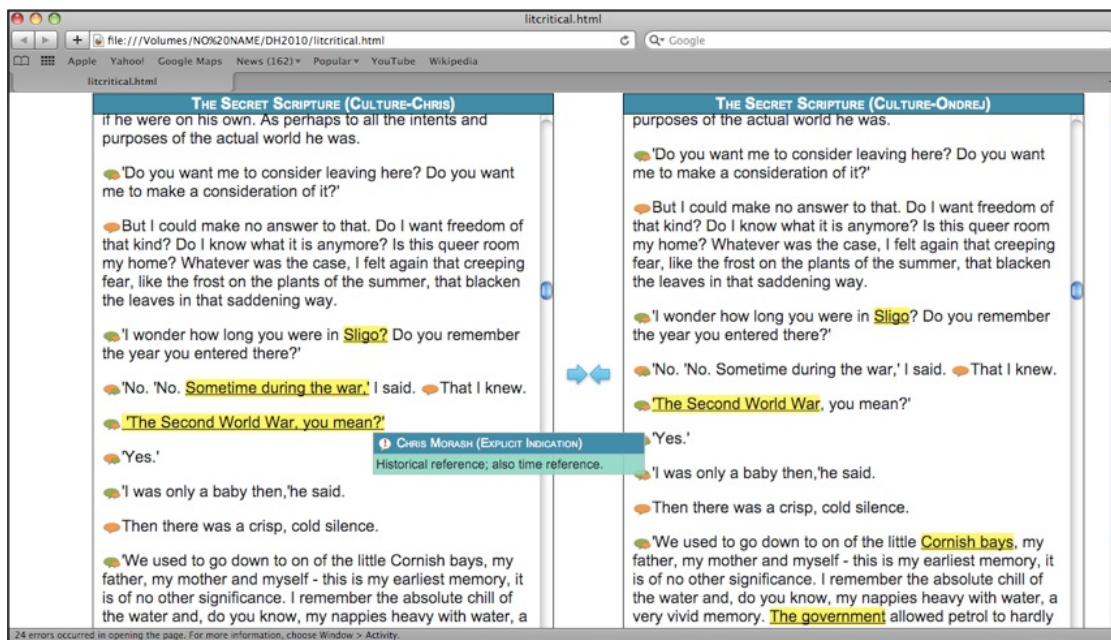


Figure 10.

## Conclusion

In conclusion, the fusing of digital humanities with literary methodologies of close reading, which is a fundamental characteristic of our research project, yields significant findings with regard to a literary-critical analysis of the chosen case study: Sebastian Barry's *The Secret Scripture*. The complex operations of "narrative voice" in the novel — whereby the most powerful indicators of trauma are indirectly conveyed, and filtered through the therapist's perspective — can be elucidated and the subtlety of the authorial achievement therein brought to light through the practices of markup and annotation. Such a technique can in turn inform a wider literary pedagogy, illustrating in close detail how form and theme work together; this may be particularly useful in teaching undergraduate students for whom developing a nuanced understanding of narrative technique is often a difficulty encountered in their initial years in literary studies.

A further critically contested area with regard to Barry's novel — namely its status as "national narrative" — is also illuminated through our linked literary and digital techniques of annotation (recording individual interpretative practices) and comparative analysis (the overlap function). As shown above, the processes through which indicators of cultural context, implicit or explicit, operate in the novel are central to the novel's effect, not least through the varying ways in which those potential indicators are identified by readers. Here the reader's own interpretation of what constitutes a marker of cultural context becomes the key determinant, and the degree — or absence — of consensus among different readers, a fruitful subject of study. Thus our case study demonstrates how digital methodologies can be deployed, not only to support "generalist" readings, but also to analyse how a novel may generate differing or shared "specialist" responses. Its wider significance, within the still evolving field of digital literary analysis, is to argue for the value of interlinked textual and cultural analysis that delves into the specificities of texts; contra Liu, "block quotations" still retain value as the "objects of sustained focus" for digital humanities [Liu 2012, 494].

The digital humanities objects, that is, the various visualization software, schema and XML encodings, have evolved in many stages through this iterative design process, and in step with the evolving research question; as a result, this paper presents an evolutionary chronicle of the development of our schema and methods. In the concluding pages of *What is World Literature?*, Damrosch predicts that "those who work on world literature are increasingly going to find that a significant share of their work is best done in collaboration with other people" [Damrosch 2003c, 286]. Those "other people," to whom Damrosch refers, now include colleagues in digital humanities and computer science, working in collaboration with colleagues in world literature and literary studies; our own case study demonstrates the rich results that can be yielded for literary criticism by the collaborative work of an interdisciplinary humanities and computer science team whereby traditional literary methodologies can be re-activated and regenerated rather than abandoned.



## Notes

[1] The work of Matt Wilkens is a notable exception to this (see [Wilkens 2012]).

[2] The nationalities of the participants were as follows: Participants 1-4 were of Irish origins; Participants 5, 6 and 10 were from the United States; Participant 7 was from the Czech Republic; Participant 8 was Spanish and; Participant 9 was Canadian-Irish. Due to work commitments, Participant 10 could not partake in the exercise, thus leaving the ratio of national and international participants at 4:5.

[3] Each of the participants was sent three passages of dialogue between the patient and therapist in *The Secret Scripture* in two different files; one entitled Secret\_Scripture\_Trauma, the other Secret\_Scripture\_Cultural\_Context. As *The Secret Scripture* was within copyright, it was not freely available in digital form. Hence, the analyst had to transcribe the selected passages from the novel into a Word file before any computation could be performed. In total, there were seven passages which contained the desired information which equated to 9,968 words when typed.

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