

## **NewRadial: Revisualizing the Blake Archive**

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### **Introduction:**

The media convergence that William Blake practiced in his 200 year-old composite art experiments continues to evolve through the digitization efforts of the online [William Blake Archive](#), a freely accessible digital collection which simultaneously centralises the storage and decentralises the distribution of reproductions of Blake's work. However, its usefulness is hampered by a limited and limiting interface that preserves the effects of restrictive book production technologies that Blake worked within and against. The features of its current interface emulate book-based practices, and encourage users to engage with Blake's media and content in fairly traditional ways, making little use of the evolutionary opportunities offered by digital technologies. Given that form is a mode of perception, as Blake would suggest, then both the media content and the delivery technology (the "ways in") related to the *Blake Archive*, or any archive, facilitate the relative complexity of our perceptions and subsequent critical engagement and understanding. As Jay David Bolter and Diane Gromala suggest in *Windows and Mirrors*, "if we only look through the interface, we cannot appreciate the ways in which the interface itself shapes our experience" (11). Reading is a highly specialised form of viewing, the interpretative demands of which are dictated by the conventional rules of language and the forms within which that language is constituted. While the book is one such formal standard, like language, the book is a structured arena that allows for a measure of play. Reading is interpretative play within the gamespace of the book and if the parameters of that gamespace change or are radically redesigned, the parameters and possibilities related to interpretative play change as well.

Looking beyond the current conditions imposed on Blake's work by the current *Blake Archive* interface, and inspired by Blake's initial, awkward provocations and by larger efforts, such as the *NINES Collex* tool, IBM's *Many Eyes* and the *TAPoR* initiative, I have been working to create an alternative interface, a modified way of accessing and participating in the *Blake Archive's* digital versions of Blake's *Songs of Innocence and of Experience*. Importantly the *Blake Archive's* digital unbinding and correlation of Blake's work, its free access, and its unrestricted allowance of direct links to specific archival materials are necessary prerequisites for the encouragement of such modifications and extensions. This new interface and critical database involves a visual re-presentation of the page icons of Blake's *Songs*, and allows users to map and share critical constellations through these pages. Most importantly, this modding activity highlights a crucial direction for the future of literary criticism and archival use, a "Web 2.0" attitude of lucid co-creative and communal readership within archival spaces; and demonstrates the profound effect that digital interfaces can have on the meaningful functions of media content.

**Thinking about the book:**

William Blake's 200 year old media experiment, *Songs of Innocence and of Experience*, features innovative attempts to interrelate words and images on each of its pages, echoing illuminated manuscript and emblem traditions, and anticipating the graphic design mentality of our current multi-media landscape. Although bound in book form Blake's *Songs* manages to transcend the convention of bookspace through sequential defiance and a playful inconsistency between copies. Encouraging critical reflection on the very nature of bookspace from within that space long before Jerome McGann called for digital tools to do the same, Blake's *Songs of*

*Innocence and of Experience* offers “a vehicle for self-awareness and self-reflection” (*Radiant* 217), revealing and challenging the ways that book technology delimits our encounter with texts and engenders familiar and unimaginative critical habits.

### **The Blake Archive**

*The William Blake Archive* is a milestone of scholarly achievement that has deservedly earned a number of accolades, including the first MLA Prize for a distinguished scholarly edition given to an electronic work (2003). It has also established a number of precedents for responsible hypermedia conversion and editorial processes related to electronic editions. The design and production history of William Blake’s composite artwork make his work well-suited for digital re-presentation and the *Blake Archive* gives scholars access to an ever-increasing electronic library of Blake’s originals that are dispersed throughout private and institutional collections worldwide. This centralisation of scattered paper archives into a single digital location, and the ability to compare such digital copies, via web access, has been one of the major goals of the Archive’s editors in their continuing efforts to overcome the access limitations to book-based versions of Blake’s work. The *Blake Archive* is thus a necessary unbinding and correlating of Blake’s original material; its database is a necessary first step towards a future that contextualises and transcends the book’s established technologies of storage and transmission.

Interestingly, though, and perhaps ironically, the current website interface to this digital collection, while diverse in that it allows users to compare copies in a new browser window, view actual-size individual pages on their screens, individually annotate pages, and access an incredible amount of metadata about each work, limits the exploration and study of Blake’s work by subscribing to an overarching perceptual apparatus that has been shaped by book-based and

gallery-based technological paradigms. The future plans for *The Blake Archive* indicate a desire to overcome this limited and limiting model, and to provide tools which will realize the unique opportunities offered by its online image collection. The [\*Virtual Lightbox\*](#), an application proposed by Matthew Kirschenbaum and Amit Kumar which has been in development since July 2000, is intended to be a “flexible environment for image comparison” (as opposed to the currently static comparison browser window that the archive produces). However, while its emulation of photographic lightbox technology confirms the need to bring image-based modes of perception to bear on Blake’s composite art, it also demonstrates an adherence to perceptual paradigms that are related to other media forms and technologies, neglecting the uniquely dynamic and integrative potential of digital re-presentation and accessibility. Its “vision” is limited to manipulating and comparing digital “objects”. To date, the *Virtual Lightbox* has not been associated directly with the archive, but William Shaw, the current technical editor of the archive, confirms that the release of a lightbox application is still imminent. Although the lightbox will realise the Archive’s goal of facilitating comparative analysis of Blake’s work, it falls short of Kirschenbaum’s original motivation - to provide end-users with tools to exploit the full potential of multimedia digital resources. Kirschenbaum’s impetus calls attention to a valuable, necessary, but still largely unrealized momentum in the evolution of database development and utilisation.

### **Alternative Interfaces:**

Today, at its “official” site, the *Blake Archive* lags behind this momentum, which is unfortunate, given that its source material is perfectly suited to the liminal conditions of data transmission and the luminal opportunities generated through interface flexibility. However, *The Blake Archive* is searchable through *Collex*, an application hosted on the *NINES* website that

“aggregates 408,833 peer reviewed digital objects from 60 federated sites.” According to the online description of the application, *Collex*, obviously inspired by the interoperability goals of MIT’s [SIMILE](#) Project, “aims to gather the best scholarly resources in the field [of 19<sup>th</sup> c. studies] and make them fully searchable and interoperable; and to provide an online collecting and authoring space in which researchers can create and publish their own work.” The opportunities generated by such an application models the kind of work that can and should be done with an ever-growing number of distinct archival initiatives. While *Collex* is “a collections and exhibits builder,” in essence a larger-scale lightbox tool, its community of users importantly shapes annotative and organizational content. As Bethany Nowviskie, the creator of *Collex* points out, *Collex* “brings folksonomy tagging to trusted, peer-reviewed scholarly archives” without directly altering the content of the original archives. In other words, this is a communal version of a feed aggregator that relies on databases of primary literary material, while building its own database of user-generated tags and associations. This kind of application acts as a transparent layer over the original databases and promotes the sharing of scholarly and critical activity in a centralised environment.

*Collex* is a model example of what can be done to “mod” the appearance and functions of the *Blake Archive*’s original user interface and expand the context and use of the archive’s material through its multiple-database concordance. As well, allowing its users to simultaneously collect and exhibit both visual and written material highlights the usefulness of including community-based and multimedia functionality in the design of any database application. What *Collex* does not do so well, though, is take advantage of the explosion and widespread utilisation of various data [visualisation](#) options that have surfaced over the past few years. Although Blake’s work is particularly suited for such treatment and *Collex* can incorporate visual art into an arena of

correlation and commentary, preserving the holistic presentation of Blake's composite art, its lexical biases subject Blake's work to the same kinds of boundaries that *The Blake Archive* imposes on the same material.

The significance of this influence can be understood more clearly through what Lev Manovich terms "[Info-aesthetics](#)." Manovich calls attention to the effects of form on data and reinforces the notion that a customisation of the form through which data is represented directly affects the function of such data. Andrea Lau and Andrew Vande Moere apply these ideas more specifically to data visualisation opportunities, identifying "information aesthetics as a visualization field which closely merges aspects of aesthetics, data and interaction," highlighting the necessary, but often invisible interrelationship between these aspects. If form and function evolve together, if modes of interaction are dependent on data and on the aesthetics that shape both the database application and its user interface, then form is indeed a mode of perception and data visualisation opportunities are occasions in which one's perceptual and, by extension, critical apparatuses can be reinforced or, more importantly, altered, remodelled and reconfigured. Multiple visualisation options (or even a dynamic visualisation interface that responds to user feedback) brought to bear on the same database can multiply perceptual and critical opportunities. If linked to a database application that, like *Collex*, involves social networking between a community of users who share scholarly research collections and correlations, such a plural field would demand a metacritical awareness of how the formal, perceptual and critical traditions shaped by book technology are evolving and revolving within computer-based new knowledge environments.

While *Collex* aggregates databases using a single tool<sup>1</sup>, other efforts exemplify the perceptual multiplicity that can be achieved by making multiple tools available for use with the same data. *TAPoR* (*The Text Analysis Portal for Online Research*) provides many tools through which a user's dataset can be explored. However *TAPoR*'s toolkit is focused on textual analysis of the written word, and results are not collectively shared with a community of users, despite its encouragement of plural approaches. Alternatively IBM's *Many Eyes* is like a *TAPoR* repurposed for data visualisations, in that it offers multiple analysis tools which transform writing and numerical data into designs that show relationships visually rather than statistically. Again, though, while *Many Eyes* offers customised visualizations as output, its input cannot be visual. If Blake's composite artwork is brought to either of these application collections, only the writing, extracted from his multimedia pages, could be used. Rather than criticising these existing initiatives for their limitations, though, I wish to use them to highlight the increasing recognition of the value of using multiple applications to produce multiple perspectives on a single database, to expand beyond the kinds of absolutist, solitary perspectives or points of engagement that William Blake associated with "single vision".

### **Interfacelift: NewRadial Visions**

Collecting all of these initiatives into the lightbox of this traditional paper, it becomes easier to see that what has been done to date involves a number of gradual and independent evolutions beyond the dominant technology of the book (and its associated perceptual and critical apparatuses). These examples validate further, more adventurous experimentation that builds on the precedents and advantages of initial attempts. The value of independently created

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<sup>1</sup> To be fair, the NINES site hosts three main tools: [Collex](#), [Juxta](#) and [Ivanhoe](#). The latter two are more specifically related to the analysis of written language, though IVANHOE is much more experimental in its approach and goals.

applications and their eventual correlation has been confirmed, as has the importance of enabling users, through the use of such applications, to cohere into a responsive, collaborative community of scholarly researchers. Instead of just browsing through authoritative archives and peer-reviewed databases to satisfy one's own research interests, users are increasingly contributing to the dynamic critical environment that radiates outward from that core database. Of course, this is done already, albeit in an inefficient form: through the peer-reviewed, but time-consuming publication of written scholarship across dispersed journal, book and online forms of publication. Like conferences, however, database applications that encourage many forms of active, responsive, and critical collaboration function more like workspaces or laboratories out of which more traditional forms of critical scholarship can eventually emerge.

Drawing from the strengths of these developmental precedents, my purpose is to continue the momentum begun by the intentions that informed the original *William Blake Archive* and to help to independently fulfil the potential that the editors of the archive have already understood, but not yet fully realised. Using the archive material as its foundation, the open-source visualisation application I have designed with the help of student programmers using the *Prefuse* visualisation toolkit, aims to re-present Blake's books as visual playspaces that encourage innovative critical approaches and reflections. The visualisation application, called [NewRadial](#) thus serves as an alternative means of visualising the *Blake Archive*, one that furthers the unbound nature of the digital image by presenting the pages as iconic nodes in a relational field. Although the original archive is transformed through the filter of this application, it is not directly affected by such operations, and neither are Blake's original page designs. This is not a space in which users can creatively remix Blake's original designs; although there might be a critical and scholarly reason to initiate such further experimentation, the aim of the current initiative is to challenge book-

based critical paradigms by re-presenting digital copies of the digitized copies of each page of Blake's *Songs of Innocence and of Experience* within a kinetic, mutating, experiential field.

Blake's pages appear through *NewRadial* as individual, but associable nodes (Figure 1, Appendix 1: Figures). Users can browse this re-visualisation of Blake's work; they can reposition or group pages categorically or individually select and isolate certain nodes away from the main categories (Figure 2); or they can map connections by drawing a line between two nodes (Figure 3) or grouping a selection of nodes together (Figure 4) and associating commentary with such connections (Figure 5). In the current alpha version, that commentary can become part of a locally installed version of the application, but, more significantly, in the final version of *NewRadial* still in development, it will be saved to a communal, web-based version that accumulates and maps collective critical engagement. Like a hybrid between data visualisation tools and the *Collex* tool, then, this visualisation supports user-based connections between nodes which are then mapped into the visual field of the pages of Blake's *Songs* that this application presents to all users. As more connections are generated between individual nodes from users the connecting line between them becomes more prominent (thicker and darker). At a glance, then, users can see which associations are more frequent and common and which relationships have not been explored at all. Annotated groupings or constellations of multiple nodes are also supported. Users can explore the critical commentary left by others or follow links provided by users to additional web-based material that exists outside of this application's database. A search function also allows users to quickly isolate groups, nodes, and edges, or foreground a specific user's contributions and constellations. Through this alternative means of accessing digital versions of Blake's work, the author/reader/visitor paradigm is replaced with a community of collaborative players, whose marginal constellations, connections

and annotations become part of a critical reef that builds up around the iconic nuclei of Blake's pages. In other words, user contributions become a new, relational database that is entirely dependent on the original archive but not limited by the original interface.

## **Conclusion**

I offer *NewRadial* neither as a model application nor as a template for best practices (indeed, it is currently in an alpha stage of development, and is being constructed as a flexible, open source tool that relies on .xml databases that can be easily customised to different content, beyond Blake). However, it is an example of the kind of work and ideas that can facilitate a necessary perceptual evolution in the ways that digital archives and their media content are collectively utilised—to encourage critical reading 2.0. The advantage of data visualisation and manipulation tools (if they are allowed to link to the resources of the original archive) is that they preserve the integrity of the original archive, while promoting imaginative deformation, reformation and augmentation of the material within flexible workspaces. The potential here is that formal re-presentations influenced by the original material and the critical intentions of the developer can contribute to new ways of seeing, experiencing and responding to media content. Rather than assuming that interactive visual interface applications simply facilitate re-organized encounters, I'm arguing that they be more accurately acknowledged as portals for engagement, new arenas, new radial opportunities whose aggregated multiplicity can expand the outer rim—the circumference—of engagement with digitized or born-digital material and encourage us to take advantage of uniquely digital learning environments. Multiple interface options are multiple doors of perception that can help to facilitate perceptual/critical change and transformation.

### Appendix 1: Figures

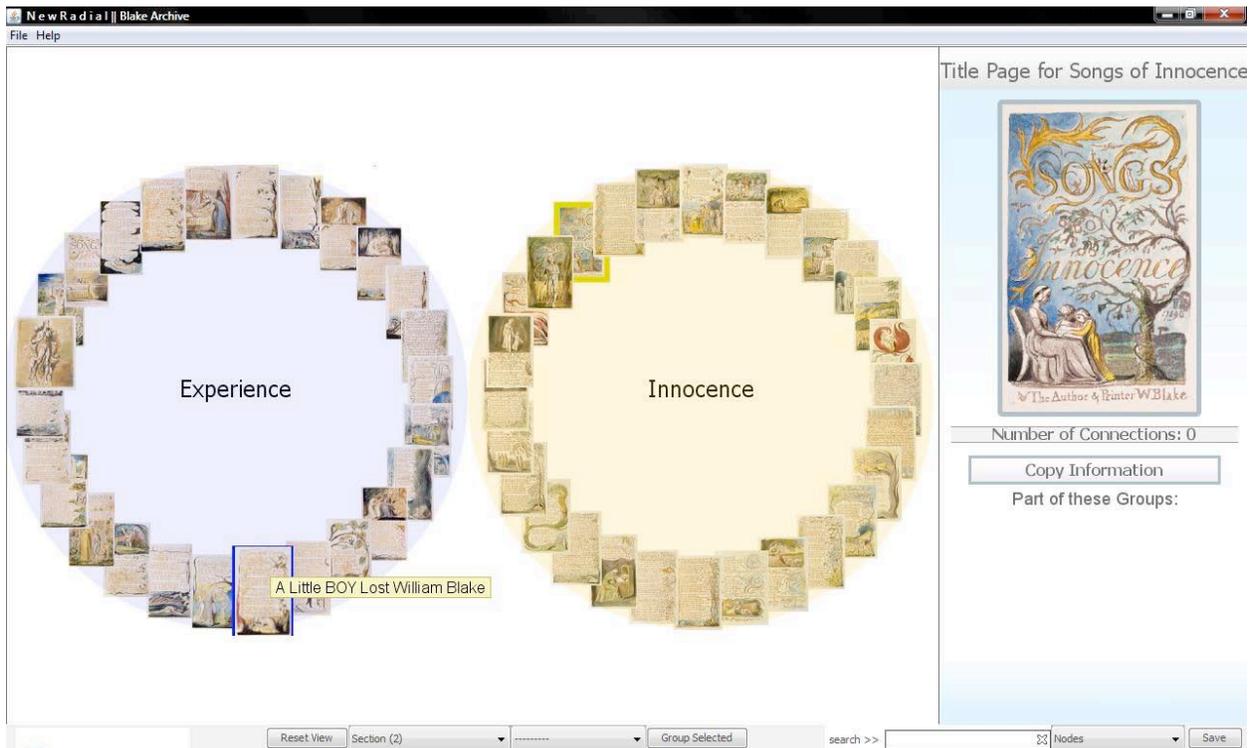


Figure 1: Blake's pages appear as nodes



Figure 2: Category selection and rearrangement of nodes

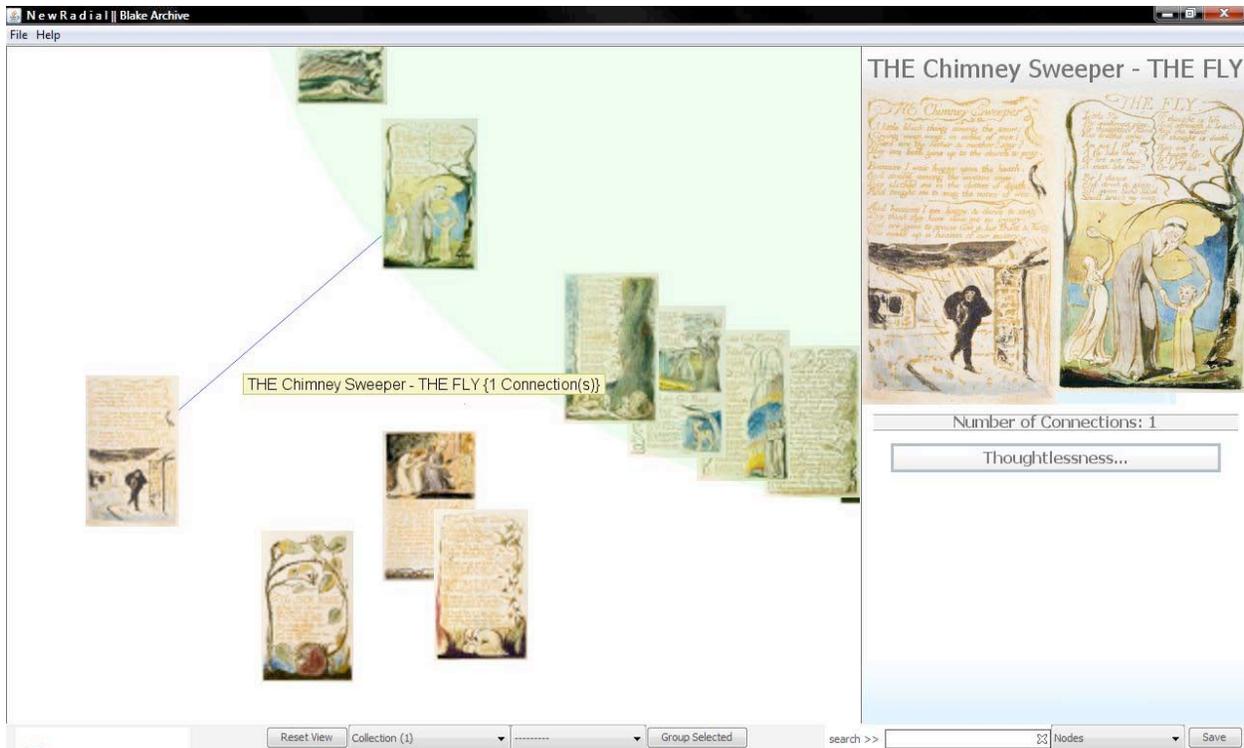


Figure 3: Mapping connections between nodes

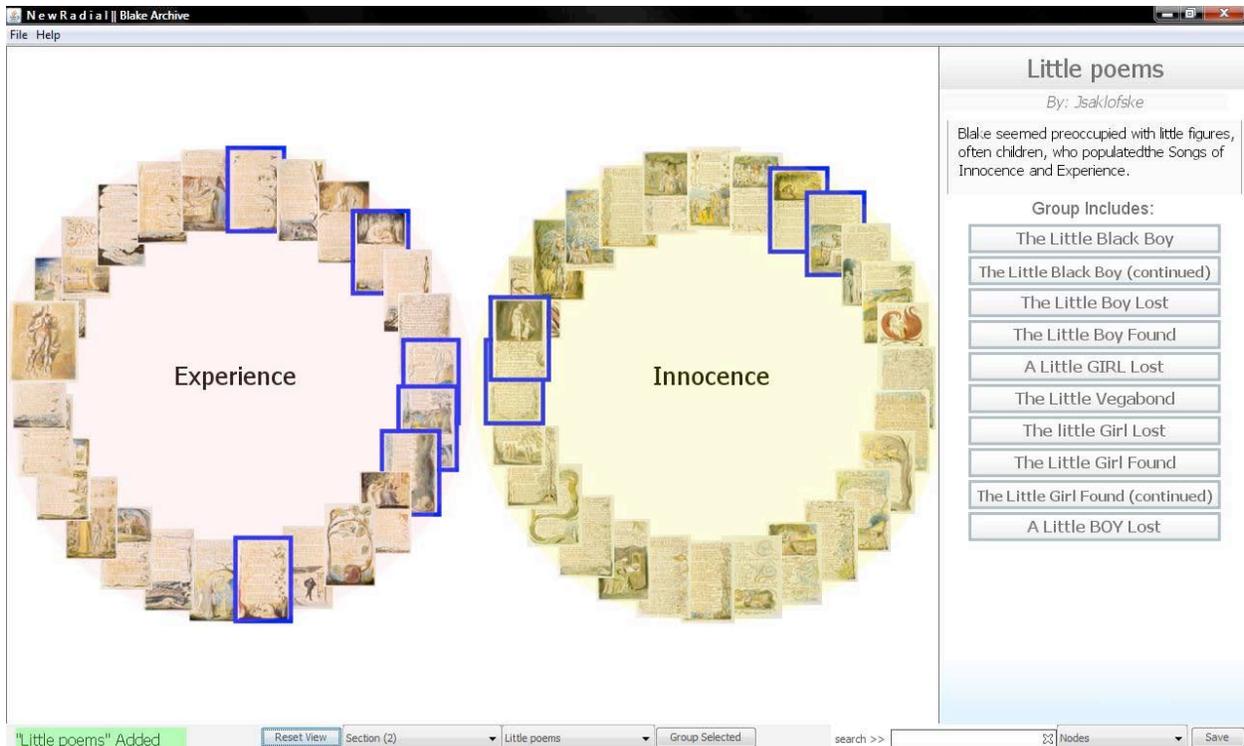


Figure 4: Customizing and commenting on groups of nodes

The screenshot shows a web browser window titled "New Radical | Blake Archive". The main content area features a large circular arrangement of manuscript images. In the center of this circle is the text "The British Museum". To the left of the circle, a yellow-bordered box contains the text "THE Chimney Sweeper - THE FLY {1 Connection(s)}". A vertical line connects this box to a small thumbnail image of a manuscript page. Below the main circle, several other manuscript thumbnails are visible. On the right side of the interface, there is a sidebar titled "Thoughtlessness..." with the author "By: Jsaklofske". Underneath, a "Comments:" section contains the text "These two poems explore the results of thoughtless action on innocent figures." Below the comment are four buttons: "Web Link", "Edit", "Remove", and "Back". At the bottom of the interface, there is a navigation bar with a "Reset View" button, a "Collection (1)" dropdown, a "Group Selected" dropdown, a "search >>" field, a "Nodes" dropdown, and a "Save" button.

Figure 5: Commenting on a connection between two nodes

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