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Theoretical Permutations for Reading Cybertexts: A Review of Markku Eskelinen, *Cybertext Poetics: The Critical Landscape of New Media Literary Theory* and C.T. Funkouser, *New Directions in Digital Poetry*

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Abstract

"Theoretical Permutations for Reading Cybertexts" is a review essay on Markku Eskelinen, *Cybertext Poetics: The Critical Landscape of New Media Literary Theory* (London: Continuum, 2012), and C.T. Funkhouser, *New Directions in Digital Poetry* (London: Continuum, 2012). Both books engage new media works and practices in ways that are transformative of the conceptual apparatus and tools of literary theory and literary analysis. Moving between the deep analysis of the Funkhouser's and the high-level abstraction of Eskelinen's will give readers an exhilarating sense of just how new media is changing our aesthetical experience and our way of thinking and writing about the textual experience.

Markku Eskelinen's *Cybertext Poetics* and C.T. Funkouser's *New Directions in Digital Poetry* set new standards for the theory and analysis of digital texts. Eskelinen's groundbreaking book synthesizes his research of the last decade into a theory for the new media textual condition with profound implications for the entire field of poetics. Through Eskelinen's transmedial reframing of the operative categories of the field, it becomes clear how certain "universals" of literary theory have been in fact strongly dependent on a limited corpus of print-based situations. Funkhouser's close readings of digital poetry are also deeply informed by a hands-on poetics of digital writing and reading practices on the web. Building on his historical account of computer poetry [Funkhouser 2007], his main concern here is to analyze the multimedia and programmable specificity of post-WWW digital poetry. Eskelinen's permutational descriptions of the narratological and ludological variables involved in ergodic and non-ergodic works, and Funkhouser's close attention to the signifying dynamics sustained by the variability of programmable forms extend the critical landscape for thinking about literary *poiesis*, digital and otherwise.

Eskelinen: Playing the Game of Theory

Cybertext Poetics is an extraordinarily ambitious work whose argument successfully challenges the explanatory power of current literary theories for digital practices. A few chapters into Eskelinen's book, the reader will begin to realize the scale of what he is up to, and to understand the momentous implications of this book. This is not simply a lucid expansion of Espen Aarseth's theory [Aarseth 1997] about cybertextual ergodicity, or a postmodernist post-digital critique of narratology informed by transmedial modes and game ontologies. *Cybertext Poetics* offers a systematic reconceptualization of basic categories of literary theory in the light of a large array of new media positions which imply a decentering of print narrative as the main model for literary theory. Eskelinen's critique of classical and postclassical narratology (chapters 6 through 12), for example, shows how cybertextually-challenged those theories are for ignoring many twentieth-century textual experiments that precede programmable media. Once narratological categories are tested upon Oulipian works or upon programmable digital works, they begin to show several shortcomings. A premise of Eskelinen's approach is that the permutational aesthetics of both print-based Oulipian works and programmable new media works activate a number of cybertextual dimensions that have yet to be accounted for in narratology. 1

The 20 chapters of the book are neatly divided into short sections that allow for multiple entries into the two main strands of its genetic code: narratology and ludology. Eskelinen is systematically rigorous in his description of the many categories that he borrows from the vocabularies of others, meticulous in his critiques, and insightful in highlighting the cybertextual features of specific works as arguments for revising, refining, and expanding those categories. As readers move back and forth between main text and endnotes, they will gradually begin to grasp Eskelinen's mapping of the combined territories of narratological and ludological studies, his familiarity with a significant corpus of experimental and digital literary practices, his impressive analysis of computer games and playability, and his thorough knowledge of literary and new media theory. Here is the Aristotle of the digital age. This is a book that no literary theorist or new media scholar can afford to ignore: a balanced survey of the field coupled to an ambitious and original contribution which will steer theoretical discussion for the next decade. 2

In order to understand the implications of Eskelinen's title, we should recall the specific meaning of *cybertext,* which he adopts from Aarseth's 1997 study: cybertexts are works that have ergodic features, i.e., works whose material and verbal instantiation is not completely determined until an extranoematic intervention by the user/reader occurs. The discontinuity between textonic and scriptonic strings of signs is another defining feature of cybertexts, one that has been increasingly explored in programmable media. Texton/scripton difference, user interactive manipulation, reading-time temporalities, and kinetic transience and mutability of programmable texts can have many different forms, but their major consequence is that a whole new set of variables has come to define the textual situation. *Cybertext Poetics* attempts to think through multiple permutations of that set of variables in ergodic and non-ergodic texts in both print and digital media, with a particular emphasis on supplementing and revising standard narratological categories. Actual cybertexts – such as Stuart Moulthrop's *Hegirascope* (1995) and *Reagan Library* (1999) or Wardrip-Fruin et al.'s *The Impermanence Agent* (1998-2002) – as well as potential cybertexts resulting from possible combinations of the proposed variables, are used for showing the limits of current narratological categories. Print narratology thus becomes a subdomain of cybertextual narratology. 3

In Chapters 5 through 10, Eskelinen puts classical (Gerard Genette) and post-classical narratological theories (Brian McHale, Monika Fludernik, David Herman) to the test by applying them to print and digital cybertexts. The narratological categories of tense, mood, and voice are critically refined to accommodate the possibilities created by the seven cybertextual dimensions of *textual dynamics, determinability, transience, perspective, access, links,* and *user function* [Eskelinen 2012, 62–63]. This refined cybertextual narratology should be able to account for new textual combinations and possibilities which imply (1) expanding the relations between registers of time (system time, reading time, story time), 4

orders of time (*achronies, polychronies, linear, non-linear, random*), durations of time (*pseudo-time, true time*), and between system and reading time (*aspect, duration, frequency, speed*) [Eskelinen 2012, 133–163]; (2) expanding the categories of narrative distance and focalization, according to changing interactions between user's discourse, narrator's discourse, and character's discourse [Eskelinen 2012, 165–179]; and (3) expanding the categories of voice (for instance, through the concept *bidiegetic narrator* – "narrators that either reversibly or irreversibly shift their position between homodiegetic and heterodiegetic positions" [Eskelinen 2012, 184]), narrative levels, and modalities [Eskelinen 2012, 191–197].

5 Eskelinen's relentless formalism, evidenced in the sixteen tables that summarize cybertextual and game variables and their factorial combinations, is a powerful antidote to under-theorized fuzzy thinking about hypertextual, generative, and kinetic textuality, or about games and playability. However, this multiplication of categories is also gesturing towards a closed system whose internal formal logic and taxonomical coherence may sound, at times, divorced from actual works, aesthetical experiences, and cultural practices. Given the theoretical nature of the work, it would be unfair to expect more interaction between theory and analysis. Since a significant number of permutations are only hypothetical possibilities without actual instances in existing digital narratives or poems, more consideration of the aesthetical and signifying implications of actual and possible combinations of cybertextual variables would help to justify the zero-count combinatorial instances beyond the internal coherence of the cybertextual system. At points, the theory sounds too carried away with its minute distinctions, as if they had to be made simply because the mathematical theoretical logic of the system requires them, rather than by any proved aesthetical and communicative significance.

6 One such case is the discussion of "reading time" and "system time" (Chapter 8 [Eskelinen 2012, 153–161]), where too much is made of the difference between constrained reading time in programmed cybertextual literature and unconstrained reading time in print fiction. Although this difference can indeed become a significant aspect of the work (such as when speed, duration, and frequency of reading are used for specific cognitive and aesthetical effects), most digital works – including kinetic texts that approximate screen time or hypertexts whose nodes are locally temporized – can be stopped, reloaded, replayed, and reread. This means that measurable reading time in digital works will share properties with measurable reading time in uncontrolled random access print works. Programmed time sometimes implies controlling the access to the whole text or incremental textual modifications (caused by the passage of time and/or by previous interactions with the textual nodes and strings), but temporalization should be considered as a textual rather than a reading property. Reading time is always variable (in both ergodic and non-ergodic works) and, in my view, it is better described as the relation between the simultaneous presence of a given string of signs and an actual reading interaction with those signs, regardless of the constraints of "system time" and of the dynamic alteration of texts caused by controlled access, external supplements, or changes over time. Limits to speed, duration, and frequency can of course be determinant if the text is displayable only once or if its display conflicts with the limitations of the human body, but if repeated interactions are generally possible and readers can define their reading time, why equate "reading time" with constrained clock-time?

7 Eskelinen's lucid prose and vibrant style, which is a pleasure to read, sometimes shifts into truculent polemics – see, for instance, his criticisms of what he describes as the narrative bias in accounts of games by Henry Jenkins, Janet Murray, Marie-Laure Ryan, and Rune Klevjer [Eskelinen 2012, 216–231]. At the beginning of the second part of the book, he argues against describing games as narratives and insists on the limitations of narratology in explaining the specifics of games, namely, "the rules, variable outcomes, and player activity" [Eskelinen 2012, 212]. Ludology and game studies are strategically claimed for his theorization of a cybertext poetics, and help him to address also the limitation of narratological categories for cybertexts. Beginning with a survey of game studies, based on his own work, and also on research by Espen Aarseth, Christian Elverdam, Gonzalo Frasca, Jesper Juul, Katie Salem, Eric Zimmerman, and others, Eskelinen then analyzes at length the medium-specific features of computer games. Chapters 14 ("Game Ontology"), 15 ("Games and Configurative Practices"), and 16 ("Game Time") offer a synthesis of the main models in current theoretical discussions and provide clear discussions of their implications. Claiming that games have to be understood as simulative practices based on rule-based configurations dependent on player activity, Eskelinen convincingly reframes the discussion beyond the representational paradigm that equates games with film, theatre, cartoons, or written narratives.

8 Eskelinen's final theoretical move (Chapters 17-20) is to attempt an integration of cybertext theory and game ontology, in the hope of advancing our understanding of different ergodic modes (explorative, configurative, textonic) in their relation to gameplay. This integration leads Eskelinen to propose and explore a number of new cybertextual variables, including user position ("possible presence and influence of other users in the realization of an ergodic work and requirements for the user's physical location and bodily mobility," [Eskelinen 2012, 349]), user objectives (traversals that have a specific finality: "consulting, completion, winning, and improvisation," [Eskelinen 2012, 350]), as well as different types of feedback loops and modes (simulative modes, modes of representation, modes of action). In the continuum between ergodic literature and gaming, the interpretive user function dominates at the literary end while the ergodic user function dominates at the gaming end [Eskelinen 2012, 364]. The final chapter is devoted to the emergence of "textual instruments and instrumental texts". Building on theoretical and artistic work by Wardrip-Fruin, John Cayley, Stuart Moulthrop, and Jim Andrews, the author describes textual instruments as an emerging genre of ergodic literature which maximizes the role of play, and maximizes the dynamics of text and user interaction even beyond the kinds of textual relations that a cybertextual poetics is able to recognize.

9 The two major contributions of *Cybertext Poetics* are (1) its revision and expansion of narratological categories, and (2) its close examination of the configurative nature of game-like procedures in cybertexts. Narratological and ludological theories are productively combined in ways that advance our thinking about literature and about games in the new media age. Eskelinen's cybertext poetics expands Espen Aarseth's cybertext theory, and can be seen as an alternative to N. Katherine Hayles's recursive intermediation [Hayles 2008], Philippe Bootz's procedural model [Bootz 2010], and Noah Wardrip-Fruin's expressive processing [Wardrip-Fruin 2008], [Wardrip-Fruin 2009] – all of which are more concerned with the specifics of human-computer interaction and programmability than with a general theory of literary communication or literary narrative. Eskelinen's high-level of abstraction in the conceptualization and description of variables and features, and his appropriation of game studies concepts for describing ergodic textuality give a strong explanatory power to his cybertext model. His recognizing the presence or absence of features, and describing their permutations, remain invaluable theoretical moves, which may anticipate future developments in the aesthetic exploration of the expanded capacity of digital media to tell stories and play (with) texts in ways that continue to challenge the narrative modalities, genres, and conventions of oral, print, and film narratives.

Funkhouser: Close Reading a Web of Writings

10 *New Directions in Digital Poetry* analyzes a sample of digital poetry on the World Wide Web, including works across several genres, and argues for the critical and aesthetical value of these works as explorations of the poetic possibilities of the networked digital medium. Through a combination of technical and literary analysis, C.T. Funkhouser's close readings of electronic literature contain an original contribution to the canon of digital literary studies. His analysis of the signifying strategies and reading possibilities of programmed works is carefully nuanced and deeply attentive to their intermedia textualities and procedural dynamics, and reflects his long involvement in the field as artist, critic, and historian. His book is a timely

addition to a growing body of close readings of digital literature which include works by N. Katherine Hayles [Hayles 2008]; [Hayles 2012], Philippe Bootz [Bootz 2010], Leonardo Flores [Flores 2010], Tallan Memmott [Memmott 2011], Dave Jhave Johnston [Johnston 2011], Roberto Simanowski et al. [Simanowski, Schäfer & Gendolla 2010]; [Simanowski 2011], Schäfer et al. [Schäfer & Gendolla 2010], Brian Kim Stefans [Stefans 2011], John Cayley [Cayley 2012], and others.

11 Aware of the hybrid multiplicity of forms resulting from programmability, intermediality, and social interaction in the current state of the WWW as a writing/reading/viewing/listening space, Funkhouser does not insist on his earlier structuring of the computer poetry field into visual kinetic text, generative text, and hypertext [Funkhouser 2007], since many post-WWW works combine audiovisual, kinetic, generative, and hypertextual forms in ways that challenge not just that triple genealogy, but also conventional perceptions of what poetry is or can be [Funkhouser 2012, 12–17]. The first chapter, "Poetic Mouldings on the Web", is entirely devoted to characterizing digital poetry on the web as an evolving series of forms and practices that have endowed our online writing and reading space with a new level of plasticity. Multiplication of hybrid forms with increased levels of interactivity and mixed modalities reflect diverse creative and communicative practices and present new challenges for the critical reader:

> Digital poetry, as a literary and artistic form, is an equivocal organism, with many identities and iterations. As an expressive form, it matters not only as a free-ranging serious practice, but because it invites vibrant, multimodal engagement for its practitioners and audience alike. [Funkhouser 2012, 4]

12 As an educator concerned with the place of contemporary media art practices in the university classroom, Funkhouser is aware of the demands, but also of the rewards of reading and playing with digital poetry, and that awareness shapes the analysis, style, and structure of his book. Chapter 2 is a general introduction to the problem of reading a digital poem, the main focus of this book, which could be summarized as a series of experiments in reading digital works. Funkhouser's aim is not to simply teach us how to read a digital poem – although we can learn by paying attention to his method – but to fully engage the works aesthetically and critically, exploring their material and formal possibilities for signifying. If there is didactic value in his effort (and there is plenty) it comes not from any directive or formulaic program, but from his ability to reveal his own nuanced and complex acts of reading as intimate, critical encounters with demanding computer-mediated forms.

13 Several works in each of the chapters have been analyzed before by other writers, but generally not with the depth of detail or with the balance between the compositional, technical, and reading aspects of each work that we find here. It is the author's ability to move seamlessly between the material and algorithmic level of the works and the semantic implications of their ergodic structures that gives readers a sense of the open-ended nature of current forms of digital poetry as an exploration of digitally-mediated signifiers. Funkhouser structures his analyses of digital poetry into three sets of digital works, each of which contains multiple genres and forms. "Case Studies 1: diversity & continuity in online works" [Funkhouser 2012, 37–106] includes works by mIEKAL aND, Jim Andrews, John Cayley, Deena Larsen, Jim Rosenberg, and Alan Sondheim. "Case Studies 2: digital poetry early in the 21st century" [Funkhouser 2012, 109–178] includes works by Serge Bouchardon, Jim Carpenter, Angela Farriolo, Mary Flanagan, Mary-Anne Breeze (Mez), Jason Nelson, and Stephanie Strickland. "Case Studies 3: poems of the Web, by the Web, for the Web" [Funkhouser 2012, 179–210] looks at forms or practices that feed upon the internet itself as a database, including works by Jim Andrews, Eric Sérandour, Eugenio Tisselli, and Jody Zellen.

14 In this third group of works, programmability is tightly coupled with the networked nature of digital media. Those works are based on interactive applications that aggregate, filter and restructure information from the WWW, with the help of transient mechanisms such as search engines, RSS feeds and other automatic procedures. These forms of net-poetry may be described as one particular genre within the growing field of Internet Art, in which artists explore the formal and expressive possibilities of the internet itself as an evolving system of databases and algorithms. The use of Google searches for producing particular word strings according to formalized rules of permutation is a good example of internet-based text generation. Funkhouser gives examples from his own experiments with the *Google Poem Generator* (2003), an application programmed by Leevi Leetho. Its automated output could be edited according to more or less conventional poetical expectations (in terms of syntax, pauses, indirectness, ambiguity, etc.), but it could also be read in its machine-like redundant and incoherent form.

15 Machines seem to be teaching us not just new ways of writing but also new ways of reading. Meditating on the interpretative possibilities opened up by machine-generated output assembled from the WWW, Funkhouser writes: "One learns to disregard the debris or alphanumeric noise and read what conventional narration allows, or to regard and accept this debris and noise as intrinsic to this type of poetry" [Funkhouser 2012, 184]. John Cayley and Daniel C. Howe have also taken the exploration of the internet as a language database for poetic production into new territories in their series *Writing to be Found* [Cayley 2011]. In this programmed work they use machine-generated collocations to liberate language from the noise of conventional discourse, recharging the dynamics of meaning transfer through unanticipated and unrecorded associations. With the help of Google's search algorithms the internet itself is treated as a large corpus of language utterances that can be harnessed for terms that do not co-occur in the database. Automatically-generated verbal strings, which bring into close proximity words with variable degrees of syntactic and semantic distance, become a tool for the proliferation of poetic meaning through permutation of signifiers. Reflecting the procedure that originated it, this form of writing creates a new field for reading – one in which the proliferation of meaning seems to originate in the computer's exponentiation of the machine of language.

16 An equivalent example, which uses mostly graphic expression rather than verbal content, is Jim Andrews's *dbCinema* (2007). *dbCinema* uses Google Image search and it also allows readers to specify other directories of images, private or public, as the work's database. Compiled images are continuously layered on the screen and the work's interface offers tools that allow readers to define parameters for configuring various aspects of what is happening on the screen. The work's visual and kinetic dynamics is thus highly interactive and emergent, constantly generating unique configurations in terms of geometric pattern, language strings, and image motion that respond to user-fed parameterization and to the continuously changing content of its database. *dbCinema*'s transience and ergodicity as an image instrument and evolving animation is a perfect object for testing the variables proposed by Eskelinen's cybertext poetics. It is also a cinematic and textual experience entirely dependent upon programmed networked media in which Funkhouser seems to recognize a new viewing and reading aesthetics [Funkhouser 2012, 185–189].

17 *New Directions in Digital Poetry* is a methodological demonstration of how close reading can be applied to the multimodal and transient character of current digital literature. Funkhouser engages the intermedial, the verbal, and the ergodic components at the same level, showing that the polyformal pluritextualities of digital poems do not have to be subsumed under the hermeneutics of the verbal text. His analysis of the interplay between language, program, and media elements addresses all the major levels of close reading digital works recently summarized by David Ciccoricco [Ciccoricco 2012]: (a) analysis of the textual topology of networked nodes; (b) reading bibliographical units that are peculiar to digital works, such as paths of nodes; (c) reading the relations between image-text; (d) reading the relations between kineticism/audio/video-text; (e) reading the interface and its navigation; and (f) reading the application and its programming code.

Funkhouser's close readings of networked programmable media explore the open-endedness of ergodic forms of poetry in ways that show the need and relevance of the conceptual distinctions made by Eskelinen's obsessive cyberludonarratology. In effect, to read both books at the same time, as I have, is to experience the irreducible yet mutually illuminating practices of analysis and theory. It is also to experience how objects and perceptions are constituted through specific modes of writing. While Funkhouser remains faithful to the minutiae of the materiality of each work's signifiers, struggling to describe how our experience of making meaning with machine-mediated signs takes place, Eskelinen charts a large-scale map of the media plurality of our transmedia condition, playing the game of theory as an architect of permutations. Moving between the deep analysis of the first and the high-level abstraction of the second will give readers an exhilarating sense of just how new media is changing our aesthetical experience and our way of thinking and writing about the textual experience.

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