presos para acceder a libros y escritos; o el novedoso estudio de la lectura en comunidad, en particular entre moriscos, beatas o monjas.

El libro continúa estudiando entornos de lectura abiertos o públicos, como calles, gradas y plazas. En estos lugares, el común de la población desplegaba sus recursos gráficos frente a los estamentos superiores: coplas, cuentos, avisos y panfletos. Finalmente, Castillo Gómez culmina su recorrido con algunos modelos de lectura autobiográfica. El libro en conjunto es resultado de un rico elenco de fuentes originales y una esmerada investigación historiográfica.

Los argumentos del libro urden discursos, prácticas y representaciones. Tramas *charterianas*, diríamos, que persiguen la compleja y muchas veces imposible apropiación de los textos por los lectores; es decir, los significados que se les daban según sus soportes, medios, técnicas de lectura y grados de competencia lectora. De ahí la necesidad de distinguir entre modalidades de lectura individuales y colectivas, orales y silenciosas. Por ello, la estética de la recepción de Iser y Jauss —pero también el enfoque de Darnton— subyace en los planteamientos de la obra. Castillo Gómez sitúa al lector en un primer plano y concibe el escrito como un producto pensado para el consumo y uso de posibles destinatarios. La variable temporal también acapara la atención del investigador, pues en ella, de manera decisiva, influyen la historicidad que envuelve a los textos y su estética, factor este último en el que el lector asciende a una posición privilegiada donde se conjugan formas de la lectura y experiencias previas de lectores u oyentes.

Los capítulos que componen este magnífico estudio hilvanan con probidad una serie de prácticas culturales que se ajustan, en distinto grado, a las prescripciones que la artillería didáctica de los moralistas de la época emplearon con el objetivo de establecer una lectura uniforme y homogénea. Garantes, a su vez, de la doctrina contrarreformista y, en definitiva, de la tradición y el sistema establecido; contra los efectos nocivos de una lectura libre e imaginativa. Castillo Gómez refrenda la noción de que la norma a menudo surtía el efecto contrario: la atracción morbosa hacia lo prohibido y denostado.

Vale la pena celebrar la publicación de este importante libro, que he tenido la fortuna de gozar en su lectura y reseña.

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MATTHEW G. KIRSCHENBAUM. Track Changes: A Literary History of Word Processing. Harvard UP, 2016, 369 pp.

Imagine a written language consisting entirely of graphical inscriptions, or semagrams, with no spoken counterpart. Imagine that "sentences" can be composed by joining semagrams together in intricate, mandala-like configurations, and that the process of conveying a complex thought in this writing system involves drawing individual lines that participate in multiple clauses of a sentence at once. So, for instance, if I wanted to tell you that my home planet has two moons, one larger than the other, that its atmosphere consists of nitrogen, argon, and oxygen, and that almost half of its surface is covered by liquid water,

I would draw a single stroke that began with the semagram for *oxygen*, then "slid down to become the morpheme of comparison in the description of the two moons' sizes; and lastly . . . flared out as the arched backbone of the semagram for *ocean*" (123).¹ To do so in a single, continuous line, I'd have to know in advance what I was going to say and precisely how I was going to say it. The moment I put pen to paper, I would have to hold the entire thought in mind, in all of its branching complexity.

As the protagonist of Ted Chiang's "Story of Your Life" learns to write in this extraterrestrial, semagraphic language, she finds that the very structure of her thinking begins to reflect its new means of expression:

my thoughts were becoming graphically coded. There were trance-like moments during the day when my thoughts weren't expressed with my internal voice; instead, I saw semagrams with my mind's eye, sprouting like frost on a windowpane. As I grew more fluent, semagraphic designs would appear fully-formed, articulating even complex ideas all at once. (127)

Some of the most striking moments in Matthew Kirschenbaum's *Track Changes: A Literary History of Word Processing* (and there are many) emerge around similar feelings of estrangement between writers and their means of expression as they leave pens and typewriters behind for the strange new world of word processing: what a writer must hold in mind while firing lines of phosphorescent prose across a glass screen, what new patterns emerge from texts that now can be saved, printed, and revised at will. The operator of an IBM MT/ST data entry machine learns "to navigate the [magnetic] tape not only by sight and by touch, but also by sound, using aural cues to know . . . when a reference code had been set successfully" (177). A poet laments the speed of word processing software, which "doesn't take as much time as actually forming the letters with your hand at the end of your arm which is attached to your body" (160). A novelist imagines himself to be "in exactly the same position as an Egyptian scribe who had spent his life carving inscriptions on granite—and suddenly discovered ink and papyrus" (67).

But for all that is alien about word processors, they became familiar, even mundane, rather quickly. This is true not only historically—Kirschenbaum writes that "[i]n 1978 or 1979, writers using a word processor or a personal computer were part of the vanguard. By 1983 or 1984 they were merely part of the zeitgeist" (xv)—but on the level of a writer's individual habits as well. Kirschenbaum's subjects, who include best-selling juggernauts and celebrated literary titans as well as data entry clerks and the deep cuts of 1970s genre fiction, find themselves adapting almost overnight to the new forms of composition at their disposal. Isaac Asimov recalls, "A night had passed—an ordinary night—but during it something in my brain must finally have rearranged itself. Now, there I was, running the machine like an old hand" (57). The vast majority of writing, Kirschenbaum reminds us, is mundane: a cluster of habits, routines, and tacit

PAGE 105

<sup>&</sup>lt;sup>1</sup> Ted Chiang, "Story of Your Life," in Stories of Your Life and Others (Small Beer Press, 2010).

knowledge we have for getting words on the page. In adopting incredibly powerful word processing technologies, even our most exceptional writers fell into day-to-day practices with their new machines that were "merely typical" (86).

Track Changes studies the emergence and adoption of word processing among Anglo-American authors from roughly 1964 to 1984, virtually inventing its own genre of literary historical writing in the process. It is a massive book, the product of five years' worth of interviews with writers, extensive digging in both paper and digital archives, technically-informed research on historical computer interfaces, and Kirschenbaum's own preservation efforts with the vintage computer collection at the Maryland Institute for Technology in the Humanities (MITH).<sup>2</sup> The confluence of these different approaches is welcome and necessary, given that "word processing" is such a multifaceted term:

The conjoining of the word "word" with the word "processing" or "processor" has at various times been used to denote principles of office management, an actual person (typically female), a physical hardware device, or a piece of intangible software. It has also encompassed not only the written production of text with a keyboard but also verbal dictation, shorthand note taking, and the duplication, mailing, and filing of documents. (x)

For all the things the book is, Kirschenbaum very carefully clarifies at the outset what it is not. *Track Changes* is not a stylistic study that attempts to account for the "effects" of new media on literature: "It does not seek to tease out subtleties of how individual authors' writing styles may have been altered following their adoption of word processing" (xii). Similarly, despite the many new interpretive routes posed by a text written with a word processor—consider the granularity with which a textual scholar can analyze a novel whose every edit has been tracked within the document—Kirschenbaum "do[es] not engage in the kind of computational text analysis or text mining we nowadays associate with the digital humanities" (xii).

More precisely, we can say that the book's object of study is the scene of what Kirschenbaum calls "writing's *interface*, by which I mean not only what is literally depicted on a screen (menus, icons, and windows) but also an interface in the fuller sense of a complete, embodied relationship between a writer and his or her writing materials—the stance and poise and 'feel'" (13). The approach brings to mind German media theorist Bernhard Siegert's work on Kulturtechniken (cultural techniques), or the primary operations like marking, sketching, and humming that exist prior to broader cultural forms like literature, art, and music.<sup>3</sup> Kirschenbaum, for his part, gives us a glimpse of what literary history would look like if it proceeded primarily through questions of technique, rather than of style, genre, influence, or aesthetics. A study informed by textual scholarship, media archaeology, and book history, *Track Changes* is a book that "pays

<sup>&</sup>lt;sup>2</sup> mith.umd.edu/vintage-computers/

<sup>&</sup>lt;sup>3</sup> Bernhard Siegert, *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real*, trans. Geoffrey Winthrop-Young (Fordham UP, 2014).

heed to the *difference* different tools and technologies actually make" (30) and thus stands as an exemplary instance of a new wave in American media theory that is inspired by the hard, technical determinism of the Germanophone tradition (Kirschenbaum cites Friedrich Kittler often) while stitching it together with approaches more culturally informed.

Because the book primarily explores the mundane habits that emerge from writing with exceptional machines, rather than the meaning of texts composed by exceptional writers, Kirschenbaum's selection of examples is entirely idiosyncratic to his method. It means that James Patterson, whose paperbacks one can't avoid in the checkout line (he publishes over a dozen titles per year), is discussed alongside Caribbean writer Kamau Brathwaite. Bonnie MacBird, the screenwriter of *Tron* (1982), shares space with the nature poet Wendell Berry. Many of the authors profiled by Kirschenbaum are mass-market paperback writers, simply because they were the only ones who could afford early word processors. The IBM Displaywriter 6580 used by Peter Straub and Steven King for their collaboration on *The Talisman* (1984) cost around \$14,000. These were machines designed with globetrotting business executives in mind (like Amy Tan's Osborne 1) or to be shared by an entire office staff looking to economize their paperwork processing (like Len Deighton's MT/ST).

Despite the striking variety of writers Kirschenbaum has assembled, he doesn't directly comment on the fact of their constellation. This is true more broadly throughout the text: Kirschenbaum refers to his study as a "story" in the preface and is in fact an adept storyteller who manages to evoke the historical scene of writing through incredibly succinct, often beautiful descriptions of computational events as they manifest themselves to the writer: "mere indicators of discrete physical events like voltages and currents and magnetic polarities. The user sees only distant shadows of these phenomena, which are recast as phosphorescent flickers on her screen" (5). The book has a distinctly narrative flow, foregoing most of the guideposts typical of an academic monograph, like argumentative refrains or chapter summaries in the introduction. As a fan of "writerly" scholarship like Kirschenbaum's, I was surprised to find myself missing them as I moved through the book's ten chapters, each of which is practically an academic monograph in miniature. But that feeling of wandering amid a world of incredible detail and media-archaeological curiosity does justice to the historical experience of approaching an entirely new technique of literary expression. Kirschenbaum manages to make word processing feel strange on the same terms as the writers who first encountered it.

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MATTHEW RUBERY. The Untold Story of the Talking Book. Harvard UP, 2016, 284 pp.

The book, understood as an object, medium, or technology, has received a lot of scholarly attention. Histories of books have produced fascinating tales of forbidden books, illuminated books, and sacred books. The impact of the printing press continues to be debated. Some years ago, critics were convinced