Original Article



History of the Human Sciences 1–27 © The Author(s) 2019 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/0952695119830900 journals.sagepub.com/home/hhs



'Mere chips from his workshop': Gotthard Deutsch's monumental card index of Jewish history

Jason Lustig [®] Harvard University, USA

Abstract

Gotthard Deutsch (1859–1921) taught at Hebrew Union College in Cincinnati from 1891 until his death, where he produced a card index of 70,000 'facts' of Jewish history. This article explores the biography of this artefact of research and poses the following question: Does Deutsch's index constitute a great unwritten work of history, as some have claimed, or are the cards ultimately useless 'chips from his workshop'? It may seem a curious relic of positivistic history, but closer examination allows us to interrogate the materiality of scholarly labor. The catalogue constitutes a total archive and highlights memory's multiple registers, as both a prosthesis for personal recall and a symbol of a 'human encyclopedia'. The article argues that this mostly forgotten scholar's work had surprising repercussions: Deutsch's student Jacob Rader Marcus (1896–1995) brought his teacher's emphasis on facticity to the field of American lewish history that he pioneered, catapulting a 19th-century positivism to the threshold of the 21st century. Deutsch's index was at an inflection point of knowledge production, created as historians were shifting away from 'facts' but just before new technologies (also based on cards) enabled 'big data' on a larger scale. The article thus excavates a vision of monumentality but proposes we look past these objects as monuments to 'heroic' scholarship. Indeed, Deutsch's index is massive but middling, especially when placed alongside those of Niklas Luhmann, Paul Otlet, or Gershom Scholem. It thus presents a necessary corrective to anointing such indexes as predecessors to the Internet and big data because we must keep their problematic positivism in perspective.

Keywords

card indexes, Gotthard Deutsch, Jewish history, positivistic history, total archives

Corresponding author: Jason Lustig, Harvard University, 6 Divinity Ave, Cambridge, Massachusetts 02138, USA. Email: jasonlustig@gmail.com When Gotthard Deutsch passed away in 1921 at the age of 62, more than one colleague lamented the loss of the 'human encyclopedia'. Since 1891, the Moravian-born Deutsch had taught Jewish history at Hebrew Union College, the Reform rabbinical seminary in Cincinnati. There, he had gained a reputation for his prodigious memory and exacting – even excessive – attention to detail. He could reportedly recall all of Jewish history from the Bible to the present; one over-the-top remembrance proclaimed that with his 'bewildering' knowledge Deutsch 'actually knew everything that happened to Jews all over the world in the last four hundred years' (Melamed, 1921; Singer, 1921). Though some saw him as a great thinker, Deutsch may be best termed a debunker: with a singular focus on facts and especially exact dates, he expended his energies collecting data and correcting others' inaccuracies. In one instance, Deutsch bound interleaving pages in Heinrich Graetz's Geschichte der Juden - the masterful eleven-volume work published from 1854 to 1876 by Deutsch's onetime teacher at Breslau's Jüdisch-Theologisches Seminar - so he could fill it with errata and supplementary notes. As for his own magnum opus, it remained unwritten. Instead, Deutsch produced something more obscure though maybe grander, a card index of 70,000 individual facts of Jewish history. This imposing cabinet of curiosities was an engine of erudition and a bazaar of the bizarre from which Deutsch drew the anecdotes that were his calling card. Without fail, obituaries commented on the index and declared the colossal Zettelkasten either a great gift to scholarship or alternately 'mere chips from his workshop', which marked an exceptional effort but ultimate inability to look beyond the details.¹ The index frames a figure who may at first glance seem a curious or even comedic caricature of a certain positivist historical tradition, but one who also imparted to his students a sense of the magnitude of Jewish history, and who straddled a mechanical pursuit of individual 'facts' with a certain attention to novel methods and visions of comprehensively encyclopedic information.

This article traces the biography and afterlife of this scholarly object and attempts to theorize its vision of totalized knowledge alongside its limits. In it, one finds an archive of Deutsch's mind holding both his data and a kernel of his peculiar historical philosophy. A monument to the temple of truth taken to an illogical extreme, it might seem plainly outmoded. But within a broader context, Deutsch's 70,000 cards highlight an inflection point in the 20th-century transformation of information, research and historiography. If at the time of Deutsch's death many scholars still spoke reverently about 'getting one's facts', within a generation many would criticize overdependence on individualized facts; simultaneously, indexes and card-based 'paper machines' were ascendant. It was a time when Walter Benjamin termed the book 'an outdated mediation between two filing systems', the author's card index and that of the reader, and a 1929 advertisement proclaimed 'Karteien können alles!' – cards can accomplish anything – signaling a bullishness about cards just before the advent of punch-card computers (Benjamin, 2016[1986]: 43; Krajewski, 2011: 2). Alongside all this, Paul Otlet's 'Mundaneum', which aimed to catalogue both books and the ideas they contained, Niklas Luhmann's extensive Zettelkasten, and even the card index of Gershom Scholem, the Hebrew University scholar of Jewish mysticism, showcase that Deutsch was not alone in his recourse to cards (Boyd, 2013; Burke, 2014; Krajewski, 2013; Liebes, n.d.; Luhmann, 1992, 2000). Deutsch's index thus calls attention to an extreme vision of a universalizing project of total knowledge and also everyday research practices, shedding light on once-commonplace dreams of historical 'objectivity' and the notion that one could reconstruct history as a monumental heap of individual 'facts'. In this vein, his work was not that dissimilar from the interminable efforts of scholars – both today and in the past – who manage sprawling notes and create massive edifices of research. His dream of complete knowledge resonates plainly with continuing visions of data collecting, calling for a reconsideration of the seeming novelty of 'big data' and the meaning of material knowledge, its advantages, and disadvantages.

The history and legacy of this card index also allows us to interrogate the manifold meanings of memory and its maladies, alongside the persistence of popular perceptions about the persona and practices of professional historical research. Deutsch suggested that personal memory was untrustworthy and admitted it was no match for the written word, and his index enabled him to store information in a way recalling Derrida's discussion of archives as prostheses of memory (Derrida, 1995). It also calls to mind Nietzsche's condemnation of monumental historical undertakings, a declaration that more is sometimes less and a critique of an inability to forget that, prefiguring Borges, leads history to become a 'gravedigger of the present' - or, transposed to another conceptual key, how a never-ending pursuit of a more detailed picture of the past might overpower one's ability to publish in the present (Borges, 1964; Nietzsche, 1874). In another mode, the index also represented a monument by which Deutsch was remembered. The index's curious afterlife, with its march from notoriety to obscurity, charts an entirely different trajectory from that of Luhmann's cards, enshrined at the University of Bielefeld, or Scholem's, given their own reading room at the National Library of Israel. At the same time, the index's adoption by his students and its portrayal in the public sphere framed a scholarly ideal of 'objectivity' and a vision of historical 'truth' that was carried into the world by the rabbinical students who nearly worshiped him and by his protégé Jacob Rader Marcus, who transported a tempered version of Deutsch's hyperempiricism to the field of American Jewish history. Consequently, instead of a curious but otherwise useless exercise and a delusional preoccupation with accumulating individual facts, closer examination shows that Deutsch's index represented a certain forward-facing openness to new ways of managing information, and instead of the ephemera of an obscure and mostly forgotten scholar, one finds a project with surprisingly far-reaching repercussions.

An accumulation of trivia or a monumental undertaking? The index's origin, context, and content

Gotthard Deutsch was born in 1859 in Kanitz (today Konice), a small town in Moravia. In 1876, he began rabbinical training at the Jüdisch-Theologisches Seminar in Breslau and subsequently received his doctorate in 1881 from the University of Vienna. A decade later, in 1891, Deutsch was called to Hebrew Union College (HUC) in Cincinnati by Isaac Mayer Wise, who had founded the school in 1875. There, he was tasked with teaching all of Jewish history from Abraham to Zionism, but he still found time to pen frequent articles in the Jewish press, to participate in the Central Conference of American Rabbis, to serve on the local school board, to edit the German-language magazine *Die Deborah* and the *Jewish Encyclopedia*, and even to write a number of novels in

English and German (Deutsch, 1898a, 1903b, 1908a). Deutsch's tenure, beyond administrative and scholarly activity, was certainly not uneventful: in 1917 he was nearly forced to resign when he became embroiled in scandal over a question of dual loyalty between the USA and his native Germany; he remained, in part, because his students rallied to his support (Dobbert, 1968). The episode points to how Deutsch had become a beloved faculty member and also a figure of interest to the American Jewish public, and his struggles to balance his research and engagement with a wider world.

Deutsch was notorious for his focus on 'facts', leading students to sometimes complain that his lectures were dry and tedious. One figure, Max Raisin (1881–1957), reflected that lessons often devolved into 'reading several events with dates out of a little notebook' (Raisin, 1952: 147; Hertzman, 1985: 83-8). Nevertheless, they anointed him the 'most colorful person on the campus' whose portrait adorned the student lounge (Brav, 1965: 83). For the rabbinical students, Deutsch appeared as an exotic figure whose imposing knowledge went hand-in-hand with a comforting old-world character. His tall frame and impressive beard conjured an image of a man larger than life, one who both knew Jewish history and embodied it (Heller, 1921; Schulman, 1922). His personal path from the Heder or traditional Jewish schoolhouse to the European university personified what students saw as a trajectory from a benighted casuistry to an ideal of objectivity, and from ghetto to emancipation (Brown, 1919).² And Deutsch inserted himself in world Jewish affairs: on one occasion, Deutsch tried to travel to Russia but discovered that the Tsarist regime insisted Jewish travelers' visas declare their religion; he called on the State Department to censure Russia and asked colleagues to apply for visas to highlight discriminatory policies (Deutsch, 1910c: 84). Such efforts led Deutsch to be viewed as a teacher not confined to the library or limited to the lecture hall, but instead as a worldly figure participating in the ongoing battles of Jewish history. He thereby modeled the active character of a rabbi expected to take his learning into the world. Even Raisin conceded that Deutsch was perhaps the College's most influential instructor for inspiring a love of history and for bringing it to life through the anecdotes that he kept seemingly on the tip of his tongue (Raisin, 1952: 148). It led students to defend their teacher against accusations that his work was dry as dust with the pronouncement that, as one student put it, Deutsch merely 'knows so many facts that he finds no time to impart the spirit' (Brown, 1919: 69).

Such claims characterized the mythos surrounding Deutsch, perhaps most colorfully illustrated in a song-and-dance routine. 'He knows everything that's happened from B'reshis [Genesis] to today', it went, 'and it really isn't work to him – it's merely play', a sentiment later expressed when one colleague wrote of Deutsch's 'game of cards' (Margolis, 1921).³ Continuing, the minstrels proclaimed: 'It's our belief he knows a heap more than [Heinrich] Graetz / And the boys at the college [*sic*] call him Dr. Dates'. Noting that Deutsch descended from 'a line of Rabbonim [rabbis]' – a reference to Deutsch's ancestor Eliezer Braunschweig (d. 1729), the Kanitz and Vienna rabbi whose given Hebrew name (Eliezer) Deutsch carried, and in whose grave Deutsch instructed his ashes be deposited upon his death – students sketched a constellation of rabbinic and scholarly lineages to which they saw their master as heir.⁴ Colleagues made a similar move by calling Deutsch a 'bor sud she-'eino me-'abed tippah', a 'cistern that never loses a drop'. This oft-repeated designation simultaneously linked him to the

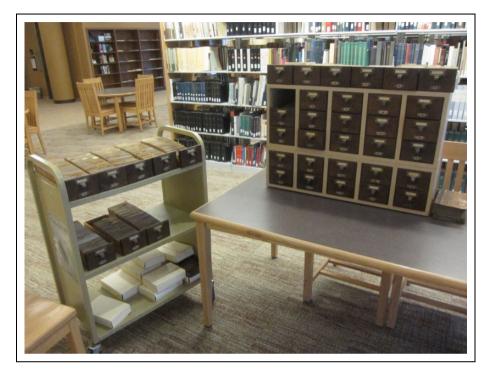


Figure 1. Gotthard Deutsch's card index of 70,000 'facts' of Jewish history at Hebrew Union College–Jewish Institute of Religion (HUC–JIR), Klau Library, Cincinnati, Ohio. A separate portion of the catalog, relating to 'Americana' (very broadly defined) is stored in the reading room of the American Jewish Archives at HUC–JIR. Photo courtesy of the author and printed with permission of HUC–JIR, Klau Library.

first-century rabbi Eliezer ben Hyrcanus (Mishnah Avot 2:9) and alluded to what some termed on other occasions his 'marvelous memory for detail', 'encyclopedic mind', or 'inexhaustible stores of memory' that allowed him to furnish his 'convincing array of facts'⁵ (Heller, 1916; L. F., 1919; Mendelsohn, 1916; Schulman, 1922; Stolz, 1921). However, it was perhaps not Deutsch himself who was a 'cistern' but instead his card catalogue where he stored drops of data growing to a sea of erudition and which served as a prosthesis for his legendary recall (see Figure 1).

Deutsch created his index in the context of a range of encyclopedic activities. In 1897, the Central Conference of American Rabbis asked Deutsch to create a two-volume encyclopedia, and he soon joined a similar effort by Funk and Wagnalls under the direction of Isidore Singer. As the main editor for historical topics, Deutsch helped publish 12 volumes of the *Jewish Encyclopedia* from 1901 to 1906. In these same years, Deutsch produced a calendar of Jewish anniversaries in the monthly *Die Deborah* (1901), reprinted in 1904 in the *Hebrew Union College Annual* (as the 'Encyclopedic Department') and as a standalone volume (Deutsch, 1904a, 1904b). That year, he also produced 'The Year 1903 in Jewish History', the first in a series of annual reports on contemporary events, the last of which

appeared in September 1921, just days before he fell fatally ill (Deutsch, 1904c, 1921).⁶ Alongside these articles, printed around the High Holidays and geared to the general public, he produced similar annals as head of the CCAR's Committee on Contemporaneous History and penned weekly columns for the *American Israelite* listing foreign events. Like his teaching, Deutsch's writing was vast in scope and ambition, as he took interest in any country where Jews lived. At the same time, his work was small in scale, appearing most frequently in newspaper correspondence and chronicles of recent events, and achieving its most minute form in his individual cards.

It should be noted that Deutsch worked against the backdrop of what can be broadly construed as an encyclopedic era in Jewish scholarship, when leading figures sought to curate Jewish culture and ways of learning and promulgating it. In 1894, Ahad Ha-'am (Asher Ginzberg) inaugurated his 'Otsar ha-yahadut be-lashon 'ivrit (Treasury of Judaism in the Hebrew Language), followed by the Russian-language Evreiskaia entsiklopedītā (16 vols., 1906–1913), the German Jüdisches Lexikon (ed. Georg Herlitz, 5 vols., 1927–1930), Encyclopaedia Judaica (ed. Jacob Klatzkin, 10 vols., 1928–1934), and others (Engelhardt, 2014; Rubin, 2004). One can similarly identify an impulse to detail historical locales of Jewish settlement at a time of urbanization and mass migration in geographic dictionaries like Gallia Judaica (1896) and Germania Judaica (1917, 1934). Deutsch, however, expressed a distinct encyclopedic vision, holding fast to an ideal of 'scientific' and 'objective' research and the amassing of accurate, up-to-date data – a vision characterized by how Deutsch approached Singer's Jewish Encyclopedia. Deutsch initially opposed the project because he believed its aim to be the 'preservation of Judaism', not 'scientific' scholarship; once brought on board, Deutsch expressed anxieties about its accuracy and continued relevance (Deutsch, 1898c, 1905a, 1906). Deutsch saw the *Encyclopedia* as an opportunity to constitute the sum total of Jewish knowledge from which scholars could draw directly, on numerous occasions pointing to the *Encyclopedia* as proof for his historical claims; still, he recognized it could not be constantly updated (e.g. Deutsch, 1903a, among others). In Deutsch's activities chronicling contemporary Jewish events, then, one sees an effort to collect all the 'facts' of Jewish history, given a certain monumental form in his card index.

Deutsch's index also arose in the face of an experience of information overload and historical disbelief. As Deutsch once recalled, it was meant to tame his own sprawling notes (Deutsch, 1917b). He also believed Jewish history presented a nearly insurmountable abundance of data. In what would be a constant refrain, he noted that Jewish history 'extends over so many countries' and its student must be familiar with them all (Deutsch, 1892, 1901, 1906, 1910b).⁷ In his 1904 report on contemporary events, he mused that studying Jewish history required 'careful reading of the papers of all countries, coupled with an extensive correspondence'. Continuing, he declared: 'One man could not do it; it would require a seminar with some means at its command in order to prepare the material for the future historian' (Deutsch, 1904c: 38). As he would put it a few years later, there were 'Books and No End', and he lamented that 'a library of 20,000 volumes will do me no good if just one pamphlet is missing' (Deutsch, 1910a). Comparing it to losing one button in a collection of thousands, he gestured at obsessive tendencies toward hoarding historical data (cf. Smail, 2014). Deutsch's dream of historical completionism accompanied a deep skepticism: 'Things are by no means a fact because people say so', he

wrote in 1900, 'or because they read them in the paper' (Deutsch 1900a). A decade later, Deutsch explained that history's 'raw material' was 'not facts, but reports of facts'. Before the historian could interpret the past, he posited, one must first ask: 'Are the facts which I find recorded really facts?' (Deutsch, 1910d: 5; cf. Deutsch, 1910b: 347). Jewish history, he complained, presented mostly 'incoherent facts'. In this light, Deutsch's declaration in the same stroke of the pen that 'the dry fact... is not yet history' can be taken in two ways: first, that facts alone do not make history; but more clearly, given the context of his broader writings, that the historian's task, in his view, was to sift through the data and find that which he could truly trust, transforming 'reports' into confirmed dates and data (Deutsch, 1910b: 347).

Deutsch wrote often of history's 'scientific' nature and inductive approach, leading to an almost positivistic method. 'From individual facts', he wrote, 'one ascends to principles', continuing: 'Facts have to be arranged in a systematic manner... First we must know, and afterward we may reason'. This 'systematic' arrangement, he believed, separated the historian from the mere annalist or chronicler (Deutsch, 1900b: 166). Along these lines, he tried to temper his obsession with facts, decrying as overly materialist those who saw history as just 'an accumulation of events'. In the same pages, though, he still defined history as 'all the facts that contribute to the progress of humanity' (Deutsch, 1897: 1). In his search for a historical 'philosophy', the problem was not just listing data - it must also amount to something. Despite any qualification, he insisted that individual facts must be properly ascertained, affirmed, and arranged, arguing that one must 'understand every single fact in Jewish history in its connection with the whole' (ibid.: 6). And when he described the historian's task, he spoke of 'joining the facts as they belong together' and described history as 'systematic presentation of important facts, i.e. all facts, influencing the development of human civilization' (Deutsch, 1910b: 347). Deutsch once pontificated on the distinction between the natural and human sciences. The former's goal, he wrote, was to 'find unknown laws', whereas history's aim was to 'perceive known facts', echoing Wilhelm Windelband's division between the natural and human sciences as nomothetic and idiographic respectively (Bambach, 1995: 57-82; Beiser, 2011: 365-390). Still, Deutsch argued they shared a common goal: 'to collect and to arrange the single phenomenon, in order to enable us to arrive from the particular to the universal'.8 Consequently, if Deutsch had a core idea it was that the 'single phenomena' of history, the specific events or 'facts', were 'known' but often corrupted or misplaced. His vision of transforming 'reports of facts' into 'facts' signaled his belief that history should be boiled down to verifiable events and personalities that simply needed to be systematically joined together to produce 'objective' and 'scientific' scholarship.

Deutsch was not especially innovative. When he wrote that 'first we must know, and afterward we may reason', he channeled Johann Gustav Droysen's distinction between *Kritik* (source criticism) and *Darstellung* (historical narration) (Droysen, 1858). Likewise, Deutsch's focus on facts was commonplace among professional US historians at this time, as was his conception of the 'fact' as a small item that could fit onto the size of an index card (Daston, 2002). A cursory glance through the papers read at the American Historical Association, the *American Historical Review*, and varied manuals of historical teaching and research displays the dominance of the discourse of facticity

at the turn of the 20th century. Deutsch's pursuit of facts, and the card index in which he placed them, took a common practice to an extreme. Still, the effort went beyond mere notetaking. It was meant to be a grand edifice to 'complete' the *Jewish Encyclopedia* and remain updated by a team of scholars as a preparatory project for the writing of Jewish history on a large scale.

In 1904, Deutsch had spoken of a 'seminar.' By 1906, he presented what he called a 'plan for co-operative work in collecting material for encyclopedic studies in Jewish history and literature'. He recognized the Jewish Encyclopedia could not be kept up-todate with the latest research. Current events like the 1903 Kishinev pogrom and Theodor Herzl's 1904 passing would be left out, not to mention whatever further developments might come. Lamenting that 'I have only two eyes, and, unfortunately cannot use them so as to read two books at the same time', he called on his fellow rabbis to submit notecards with details from their readings. He proposed that a central office gather material into a 'system' of information about Jewish history, and he suggested they publish the notes in the CCAR's Yearbook. Year by year, he hoped, they would 'perfect the work done by the Jewish Encyclopedia', with a volume published on its basis triennially, eventually producing a second edition of the *Encyclopedia* (Deutsch, 1906: 249). A year later, Deutsch proposed that 20 men could 'systematically catalogue 40,000 facts in one year' leading to the accumulation of 'an unequaled wealth of information' (Deutsch, 1907a). By 1908, though, he reported that only three people had contributed (Deutsch, 1908b). Meanwhile, he waded through periodicals in the Hebrew Union College library to mine the details of history and repeatedly tried to galvanize contributors with selections of his 'facts' (Deutsch, 1907a, 1907b).⁹ He did receive assistance from his students, to whom he assigned the production of cards and facts as class assignments (Brav, 1965: 79-80).¹⁰ Still, it seems that Deutsch mostly toiled away in isolation, adding cards to his index almost daily. Students spoke of 'the card catalogue' that adorned a full wall of Deutsch's home study, and a colleague reflected on its growth 'to its gigantic dimensions' (Brav, 1965: 79; Margolis, 1921). If in 1908 it contained 10,000 cards, by 1917 it had ballooned in size to 50,000 items, reaching 60,000 in 1919 and nearly 70,000 at the time of Deutsch's death in 1921 (Deutsch, 1908b, 1917b; Brown, 1919: 69). It seems that Deutsch consistently produced 5,000 cards per year (about 20 per workday) for the final 13 years of his life.

Deutsch's *Zettelkasten* symbolized vast knowledge, indicating how he could supposedly look up any fact or statistic relating to Jewish life anywhere around the world, and it naturally inspired hyperbole: even Deutsch's detractors recognized his 'unique personality', and others dubbed him 'one of the most remarkable minds in America' and cheered his project to 'collect historical data'.¹¹ With the 'thousands of isolated facts', as one colleague put it, they hoped he might produce a great history (Joseph Stolz, quoted in Heller, 1916: 259-60). One posthumous recollection declared that such a collection of data 'has not been so scientifically assembled by any man before him', and Berlin's *Jüdische Rundschau* described it as 'unique and of inestimable worth'.¹² A soberer examination, however, shows a scholar whose writings were convoluted, choked with 'facts' and lacking any overarching arguments. Throughout Deutsch's oeuvre, consisting mostly of brief articles in the US, British, and German-language Jewish papers, he usually recounted anecdotes without thematic thrust or tried to correct others' mistakes

with his oft-stated motto 'de minimis curat historicus'. Deutsch himself pointed to critics who called him a 'chiffonier' or historical rag-picker, though he defended his 'inconvenient though undeniable facts' (Deutsch, 1916). A number of contemporaries recognized the limits of his interest in individual facts. 'I get the impression', one figure put it, 'that the charm of the facts of history, was so great for Deutsch, he lost himself so completely... in the study of them, that he was never altogether able to say he is through with studying them and that he is ready for writing' (Schulman, 1922). One review of Deutsch's *Scrolls* (1917), which collected some of his scattered articles, reflected that the articles lacked organization. 'In order to obtain value,' the reviewer insisted, 'facts must be organized... Isolate a fact as one isolates a germ in the laboratory, such a fact becomes worthless for historical purposes' (Leiber, 1917).

Dusting off the boxes, one senses immediately why it inspired so many to either reverence or caricature, with the miniscule scale of the work each card represented and the monumentality of the corpus they composed as a whole. Deutsch's facts are varied, surprising, and often amusing, referencing a dizzying array of newspapers, books, and other sources in Russian, Hebrew, Yiddish, German, English, Italian, and French. If he had once spoken of 'careful reading of the papers of all countries', he now gathered in his index information on Jewish life around the world using these same sources, trying to verify or otherwise debunk all these 'reports of facts' and distill them into a database of information which would paint a complete picture of Jewish history, especially in the modern world.

Examining the cards, it becomes clear that the index constitutes not a mythic total history but a specific set of facts and data that piqued Deutsch's interest and which reflected his personal research priorities (see Figure 2). Most of his 'facts' fall under three main headings. Firstly, one finds an unending procession of biographical data, especially dates of birth and death. Deutsch also filed information on particular countries, cities and locales, and according to a myriad of specific themes. For ANTISEMITISM, 1909. BOHEMIA: 'In the health resort Radeschowitz a bill board is placed with the inscription "Jews, dogs and Germans not admitted"". He noted an 1809 law restricting Jews in Warsaw to certain streets (GHETTO) and a 1631 plague that left 170 Jews dead in Venice (PLAGUE). Deutsch frequently divided a major country's cards into a chronological set (listing events) before turning to 'literature' (published works) and subheadings like antisemitism and military service. For Austria, the cards on the latter topic expanded not unexpectedly in 1914, when he documented 122 individual Jews who had been killed in action, wounded, or otherwise awarded honors. By far, the largest areas included ANTISEMITISM (1,739 cards) and ZIONISM (540 cards) alongside AUSTRIA (his home country) and RUSSIA (in his lifetime certainly the greatest antagonist of the Jews), each of which constituted almost an entire box. One finds topics on incidents outside a specific geographical context, like BRAVERY (137 cards) and EXCOMMUNICATION (125 cards); others, like mayors, publishers, painters, and explorers catalogued individuals by profession.

Deutsch also provided statistics, like the Jewish population in India in 1912 (20,980, according to London's *Jewish Chronicle*) and Russia according to the 1905 census (6,045,690, as reported in the *Allgemeine Zeitung des Judentums*). There were 6,891 mixed marriages in Hungary in 1912, he noted, rising in proportion from 10.23% in 1901 to 12.4%. He sometimes pasted newsprint cuttings to present a statistical chart or inserted

ACCUSAFIONS AGAINST THE JERS. "An Essay on the Commercial Habits of the Jews" (London, 1809) is certainly not pleasant or flattering reading, but it gives an insight into the projudices against the Jew at the beginning of the inneteenth century. Many foreible objections." the writer remarks (page 71), "present them-selves against the naturalisation of the Jews; the principal of which are's first, the pecuniary power of that poople and, secondly, the permicious efforts which might be produced by such an open encouragement of immor-ality and religious infidelity." Again, he says (page 77):--The Jews will assuredly '." Again, he says (page 77):--they neglected in the penitiane of their power and presperity, in their pristine slory when they even possessed a temperature in the scale of nations, they will resisting, they will promote the encroachmout comparative insignificance. Instead of work wherea to enclose their power and presperity. In their pristine slory there no closer intimacy by imparting to them a community of fis. Schould we admit them into closer intimacy by imparting to them a community of fis. Schould we admit the story of the points in the lands another merchantible comicsito, which from the first to the last penny, would all flow out of our own pockets. Jur: Chr. Feb. 2. 1906 , 10. 15. Aeronauts. Aladar Taussig, first lieutenant, succeeded under great difficulties to bring reports to Przemysl and to leave it in an airship. D.Isr.Ztg.1914,#44. LAMBERT EDIEZER. 1. Communal worker and author, born at Metz, Lep. 13. 1833 Jew. Chr. apr. 27. 1906. p.9. Died Apr. 19. 1906 at Paris. Son of Mayer L. Univ: 1902,266.

Figure 2. A selection of cards from Deutsch's index, indicating a range of topics and his idiosyncratic style and interests. Photographs courtesy of Hebrew Union College–Jewish Institute of Religion, Klau Library, Cincinnati, Ohio.

ACCUSATIONS. AGAINST THE JEWS 1. In a meeting at humich pus are accused of responsibility for meal famine, aug. 32. 1905. Dr. 24. 1905, 438-9. 1. Jews are responsible for the obstruction in the austime Reichsrat . Schneider in the dist of Lower austring, Nov. 14.1905. 3 Stoecky holds them responsible for socialism Girmany Rechotag, \$54. 14. 1915 4 John Durns, English labor leads, charges here with ou-like submission to authority. J. Ch. Su. 15. 1905. INDUSTRY, Jews in. William Merton, head of the "Metallgesell-schaft", t## # in Frankfurt a.M., the gre#at est concern of its kind. Weltwirtsch. Archiv, I, 1, Jena, 1913. 0e. Wsch. 1913,455. SWEDEN. Statistics issued by the Royal Swedish Statistical Bureau show that the total Jewish population in Sweden numbers 3,012 (2,026 males and 1,886 females). The number of Jews has increased since 1890 by 510. The per-centage of Jews to the general population in 1900 was 74. Of the Jews enumerated 1,551 belonged to the State-recognised Jewish church, 2,361 belonging to their own religious organisations. The latter are mostly orthodox immigrants from Eastern Europe. Jew: Chr. Jan. 12. 1906, p. 40. See: accusations ag. the jus

Figure 2. (Continued).

a photograph. And Deutsch recounted the mistakes of others. Under PSEUDO-JEWS, he gave 160 figures from Pythagoras to Napoleon who some claimed to have been Jews – but he argued otherwise. Over 200 LEGENDS listed stories like a 1914 report that a Jewish soldier in the German trenches played the Kol Nidre refrain on his clarinet and 'brought

theirty [*sic*] men from the Russian army over who could not resist the charm of the melody, and were made prisoners'. These cards represented his effort to achieve three distinct goals: to ascertain the 'facts' of history and especially dates, to document events and statistics relating to Jewish life in modern times, and to correct others' mistakes and debunk theories.

Deutsch expended his greatest energies documenting events since 1850. The great irony was that Deutsch claimed newspapers were untrustworthy, but 'fact' after 'fact' was farmed from the contemporary press. It was thus no coincidence that Deutsch's index was once termed a 'grand chronicle of the present' (Brown, 1919: 69). Still, Deutsch's *Zettelkasten* contained cards touching on the entirety of Jewish history. The Zohar, the 13th-century mystical text, and the 12th-century philosopher Maimonides both merited a handful of cards. He frequently cited rabbinic and medieval sources on issues like ANGELS and INFORMERS, among others. And Deutsch gathered a number of Hebrew terms, placed at the end of the index and alphabetized according to their English transliteration. Altogether, one finds an interminable assortment of facts on almost any topic, with major sections relating to blood accusations and blood libels, fiction and literature, the Passover Haggadah, memoirs, mixed marriages, orthodoxy, Palestine, periodicals, and universities, but also obscure topics including hunting, Russian Jewish dwarfs, and myths and magic.

All this was listed in alphabetical and chronological order over a total of about 50 boxes, creating the impression of its monumentality, which invited the praise of students and awe of colleagues. The mass of cards, and the index of events and personalities it contained, held forth a promise of enabling one to extract a summary or outline of modern Jewish history around the world or on a particular topic and subject heading. Alternately, flipping through the cards one encounters colorful anecdotes that Deutsch extracted from periodicals to which not many in the USA had access and, in an age prior to the possibilities of digital search, might have been left forgotten – one recognizes in the tactile reality that so many of the cards are on flimsy copy paper, on the verge of disintegration with each use. In this process, though, it becomes evident why the project instilled paralysis in Deutsch, who interminably pursued any missing or inexact 'fact'. Further, Deutsch tried to instill a certain chronological, geographical and thematic method of organization. But this arrangement is also a stumbling block to anyone who might want to use it, including Deutsch. ACCUSATIONS AGAINST THE JEWS (489 cards), for instance, presents an array of events organized not by date but in a surprisingly unsystematic alphabetical order. Instead of indicating when such accusations were more or less prevalent, which could only be indicated by reorganizing cards chronologically, the default alphabetical sorting, which shows instances in disparate locations like London (in May, 1921) alongside Sziget, Hungary (from 1867), gives the impression that such anti-Jewish events were everywhere. And even this organization was chaotic. The card on Sziget is actually listed under 'Marmaros', the publication with which the card's text began, and an immediately preceding card is ordered based on its opening 'A long list of accusations...', not the reference to its source: Goethe's Das Jahrmarketsfest zu Plundersweilern.

There is also very limited metadata. Many of the cross-references, referencing cards like PIUS x or GERMANY, 1848, to give just two examples from this set, provoke one to wander the corridors of cards searching for what Deutsch had in mind. The cards may have

been useful for him, but the individual cards that were not integrated with one another give more than a subtle hint why it was that Deutsch was never able to synthesize them, instead writing article after article listing off newly-gathered factoids. Further, very few cards are out of order, suggesting that Deutsch may not have extensively removed sets of cards to shuffle them into novel patterns, as returning them would probably have resulted in out-ofplace items. Still, placing Deutsch's cards alongside his annual reports reveals an internal logic, pointing to the possibility to quickly glean a sense of the Jewish world and its issues and struggles on a global scale. The fact that he always opened with antisemitism and ended with Zionism was no coincidence. The alphabetical procession through countries of Jewish settlement hints that Deutsch thumbed his way through the catalogue, picking out facts he wished to include; each episode he recounted corresponded to an individual card. At the same time, it constituted a disorganized mass of data: an array of varied and unpredictable facts, both grand but essentially trivial.

Deutsch's index, then, did not constitute the systematic and overarching view of Jewish history and contemporaneous Jewish issues that Deutsch had initially hoped to create. Instead, it was much more personal. It reflected his singular reading regime, and it worked with a certain shorthand: In later years Deutsch often just cited 'Yiddish papers' or 'Daily papers', and in some instances he referred to 'private information'. The cards, topics, and sources provide a sense of the specific information that interested Deutsch. For instance, the cards on AERONAUTS (later AVIATORS) reflected his interest in aviation – one 1912 photo depicts Deutsch grasping a biplane's control stick – and his interest in fiction paralleled his own novelistic aspirations.¹³ One might even say that instead of paving the byways of Jewish history, as one student put it, the project laid forth Deutsch's own mental pathways (Brown, 1919: 68-9). The monumental catalog is thereby suggestive of what Vannevar Bush would later dream up as the 'memex' or memory index. This mythical mechanical desk and data processing system, which Bush proposed in 1945, would allow researchers to easily locate individual records, files and references from vast libraries of microfilmed volumes in a sort of proto-hypertext (Bush, 1945). Certainly, Deutsch's Zettelkasten was very different from this envisioned research machine, but it aligned with some of Bush's impulses: the index was a kind of colossal research furniture, and Deutsch envisioned it as a repository of total information. In another fashion, Bush described a 'memory index' that would work 'as we may think', by which, cryptically, he meant not artificial intelligence but the capability to retrace the paths of the reader's thought process. One might say, too, that Deutsch's catalogue allows us to follow Deutsch's mental pathways, providing not a total index of Jewish history but of Deutsch's personal knowledge and memory.

Altogether, the form and format of the index – both of the individual cards as well as the body of data as a whole – highlights a fundamental tug-of-war between big history and small facts. In one way, the cards' uniform size and format was part of Deutsch's dream to produce a systematic method of research and writing. If he initially wrote his cards by hand, the vast majority were typewritten with Hebrew words written in blank spaces when required. He was especially enamored with cross-references, which were marked in red type; the bottom right of each card was adorned with abbreviated citations, often more than one. It lends another meaning to one student's lament that it was 'merely mechanical': in addition to the rote method of processing sources in pursuit of the historical 'facts', one finds in Deutsch's catalogue one implementation of what Lorraine Daston would later term 'mechanical objectivity', an ideal of removing the scholar's self from the process of research and especially historical and scientific representation (Daston and Galison, 2007: 115-90). Deutsch's index was created out of an almost algorithmic processing of historical sources in the pursuit of a totalized and perfect history of the Jews; it presented, on one hand, the individualized facts, but together also constituted what we might term a 'history without presentation', which merely held the 'facts' themselves without any attempt to synthesize them (cf. Saxer, 2014: 225-32).

The 'size' of facts served a dream of information recombination, and was served by the card form. Other advocates of Zettelkasten like Johann Jacob Moser (1701–1785) remarked that fairly small facts meant the mass of information was broken down to its individual components and thus could be constantly reshuffled in a 'game of cards' (Krajewski, 2011: 53-5). By Deutsch's time, 'facts' came to be seen as small in scale and, as Bruno Latour has reflected, information is more malleable when it is not too large (Daston, 2002; Latour, 1986: 19). However, the miniscule size of 'facts' did not necessarily reflect Deutsch's adherence to any theory of information. Instead, it indicated his personal interest in distinctions of the smallest scale, vocalized by his motto 'de minimis curat historicus', that history's minutiae matter. In one 1898 article, Deutsch tried to demonstrate that history's trifles provided color for the lives of great men and average people alike, and also could undermine false narratives. Deutsch wrote that his teacher Heinrich Graetz refused on all but one occasion to call Leyzer Lazarus the 'director' of the Breslau Jüdisch-Theologisches Seminar, 'show[ing] the smallness of the great man' (Deutsch, 1898b: 101). The episode, which Deutsch explained was not recorded in Graetz's biography, underlined his skepticism of sources that dissembled the true reasons behind events or the character of contemporaries. In another representative article from 1905, Deutsch gave what he termed 'a lesson on the value of anecdotes in history'. Writing of Leopold Zunz, a pioneer of modern Jewish studies, Deutsch sought to correct claims that he had planned to convert to Protestantism by explaining that another article had been based on an incorrect reading of sources. 'Anecdotes', he concluded, 'have their historic value, if properly tested' – reflecting both his interest in details and also the need to ascertain whether they were true (Deutsch, 1905b). He tried to show that this 'favorite topic' of his, 'insistence on exactness in chronological dates', amounted to more than a trifling (Deutsch, 1915, 1905a). Deutsch compared such historical accuracy to that of a bookkeeper who might recall his ledger by memory. 'People would look upon such an achievement', he reflected, 'as a freak, harmless, but of no particular value, in fact rather a waste of mental energy' (Deutsch, 1916). However, he sought to show that these details mattered, no different from how 'a difference in a ledger of one cent remains just as grievous as if it were a matter of \$100,000' (Deutsch, 1904a: 3).

Deutsch pursued ideals of accuracy and objectivity as epistemic virtues that held particular meaning in the setting of a rabbinical seminary, and his students seem to have adopted them wholesale. In 1916, celebrating a quarter-century of Deutsch's tenure at Hebrew Union College, student James Heller echoed his master's teachings when he wrote of the 'scientific precision and impersonality' with which 'the array of facts collected in support of the deductions to be drawn' must be also given the 'personal element' that 'lend[s] warmth to what would otherwise be but an arid display of mental gymnastics' (Heller, 1916). Another student then wrote: 'Philosophy may interpret [history] and religion and ethics may exhibit its values. But before these can speak, we must be sure of our facts. To elicit facts, to make sure that what has happened, has happened, beyond doubt as a matter of reality, is the first duty of the historian'. In the end, he concluded that Deutsch's teaching was 'justified and forceful' (Louis Grossman, quoted in Heller, 1916: 258-9). One student's rabbinical thesis, also completed that year. opened with the declaration: 'We must not forget that History is a Science. Its facts can never be doubted. One may indeed, differ as to the interpretation of facts but never dispute the fact per se!' (orig. emph., Holtzberg, 1916: Introduction). Just the same, for students the catalogue symbolized the historian's vocation. Deutsch's close friend Joseph Stolz, writing of the Chicago rabbi Bernard Felsenthal (1822–1908) who had penned a history of that city's Jews and was instrumental in the 1892 formation of the American Jewish Historical Society, noted that Felsenthal 'was not the systematic organizer who worked with a stenographer and card-index' (Stolz, 1922: 259). All this had a particular purpose within the context of Hebrew Union College and its rabbinic curriculum. Just as Deutsch modeled the ideal of the active rabbi playing a part in the world around him – one should not forget that he was, even without a ministry of his own, a trained and ordained rabbi – his ideals were a grounding influence for the students, helping them move beyond homiletics. Deutsch's index and his 'facts', then, seemed to his students to embody a moral value in addition to epistemological utility.

If Deutsch's index symbolized an ideal to his students, more careful examination foregrounds tensions at the core of Deutsch's project. At once intended as a foundation for a systematic history of the Jews, it was deeply unsystematic; meant to be a means of productivity, in the end Deutsch was essentially unproductive. Deutsch's focus on facts can be viewed as an expression of a certain Romantic mood, emphasizing the individual in history and the mode of 'genius'. The fact that Deutsch's students saw their teacher's index as a monument to his historical genius mirrors this tension of monumental and individual, indicating how the index could not be separated from its creator: The index can be seen as a 'grand chronicle' and also as an embodiment of Deutsch's individual personality, approach and interests, simultaneously a crowning achievement and a tragic marker of one scholar's incapacity to move past the minutiae. It leads one to consider: do Deutsch's cards represent 'mere chips from his workshop', individual items with little intrinsic value that fell to the floor as he worked toward an ultimately uncompleted history of modern Jewish life and its travails? Or does it constitute a great work in and of itself? Some might side with Deutsch's self-deprecating quip that historical accuracy was 'harmless but of no particular value'. Moreover, Deutsch criticized Orthodox'casuistry' and claimed to study Jewish history as a 'science'. Still, he cast the pursuit of accurate historical 'facts' in traditional terms when in 1917 he celebrated his fiftythousandth card with an article titled 'Siyum', referencing the celebration upon concluding study of a tractate of Talmud (Deutsch, 1917b). It all might even seem a bit comedic if not almost tragic, an impressive and imposing effort, but one with a limited legacy. Nevertheless, Deutsch's project illuminates a broader history: it showcases one scholar's quest for 'objectivity' and total history as well as its limits, alongside a popular vision of the vocation and vocabulary of the professional historian preoccupied with 'getting his facts'. And it constitutes an important but overlooked signpost in the 20th-century history of information, as 'facts' fell out of fashion but big data became big business.

Situating Deutsch's cards in the history of research and information management

Taken on its own, Deutsch's card catalog presents a tantalizing artifact that, like the facts it contained, is certainly curious but not necessarily of wider import. However, when placed in context one quickly recognizes that his project falls within a broader history of the scholarly use of card catalogues in pursuit of total knowledge. From Konrad Gessner's 1548 drawer of paper slips to the Zettelkasten of Hegel, index cards became a critical tool for intellectual work; the first card catalogues developed by the Austrian national library in the 1780s alongside 20th-century enterprises like Herbert Field's 'Concilium Bibliographicum', a system of zoological research, and Paul Otlet's 'Mundaneum', show the possibilities for managing increasingly complicated bibliographies and systems of knowledge (Boyd, 2013; Burke, 2014; Krajewski, 2011: 9-20, 57; Zedelmaier, 2002). Looking beyond such monumental efforts, by the turn of the 20th century the notecard method of research was widely taught. Herbert Baxton Adams' model of a historical seminar room suggested it have a dedicated catalogue; influential research manuals by figures like Ernst Bernheim, Charles Langlois and Charles Seignobos proposed scholars use slips or notecards to keep track of sources; and Fred Morrow Fling wrote effusively of the 'manifest advantages' of the 'card system of note taking' (Adams, 1886: II, 137; Bernheim, 1889: 385; Fling, 1920: 109-10; Langlois and Seignobos, 1900: 81-3). Beyond the realm of historians, advocates called card indexes 'the only portable, elastic, simple, orderly and self-indexing way of keeping records', and the practice was common enough that Gustave Flaubert parodied the unending and ultimately futile pursuit of all knowledge in his 1881 satire Bouvard et Pécuchet (Dickinson, 1894). Such catalogues, whether large or small, institutional or, like Deutsch's, highly personal, can be situated within the contours of a half-millennium of the revolutions in print production and media consumption. Card indexes were a tool to manage information overload and enabled one to move and recombine letters, words and ideas – which led Walter Benjamin to describe the explosion of the book into its fundamental components, recorded on cards, so that they could be recombined (Benjamin, 2016[1986]: 43). Moreover, card indexes give further form to Bruno Latour's meditations on writing: if Latour described writing as a kind of 'flattening' of knowledge, then card indexes, like vertical files, represent information in three dimensions, making ideas simultaneously immutable and highly mobile, and the smallness of ideas and 'facts' forced to fit on paper slips allowed for reordering (Latour, 1986: 19-20).

Altogether, one might say that in Deutsch's day card indexes were not old-fashioned. New technologies and techniques like edge-notched cards and then punch cards opened the door to the possibilities of card index systems. Further, in breaking down books and articles into their constituent parts – whether as excerpts, facts, or other data – shows Deutsch in tune with trends when it came to the mechanics of research, regardless of his own inability to ultimately transform these 'chips' into a greater work. Just as with his interleaved volumes of Graetz's *Geschichte der Juden*, he sought to deconstruct historical works to make them more useful to him as a scholar. In both instances, Deutsch exploded the physical object in a manner presaging Benjamin's call for the 'outdated' book's unbinding. At the same time, one could also argue that Deutsch's extreme vision of facticity and skepticism breathed life into R. G. Collingwood's critique of what he called 'scissors and paste' history – meaning both those who uncritically cited earlier works, and the use of scissors and paste to cut apart sources on index cards – alongside his censure of the positivist historians who never stopped collecting facts (Collingwood, 1943: 257-61). Indeed, whether one looks to Collingwood's condemnation of positivism in the 1940s, E. H. Carr's notes in the 1950s on how historians actively select the 'facts' they collect, or the postmodern assault on 'objective' knowledge, one could sketch a century-long trajectory of retreat from the 'facts' of history and see Deutsch's catalogue as a relic of what one scholar has termed a 'noble dream' of historical objectivity (Novick, 1988).

What, then, is one to make of Gotthard Deutsch and his index, this strange relic of positivistic history? Deutsch himself never theorized his index, treating it – like his whole focus on 'facts' – at face value. Still, it leaves much to consider. His monumental card index of Jewish history stands out in more ways than one. Firstly, in contrast to other contemporaneous card index projects like Otlet's 'Mundaneum' or the U.S. Patent Office's card index of chemicals, Deutsch worked not to catalogue books and bibliographical data for the purposes of lookup and comparison, but for the information itself to constitute an actual history of the Jews that could be maintained systematically and kept up-to-date, a kind of bookless encyclopedia (cf. Hill, 1900). In this way, it could be more flexible than the monumental narrative histories such as Heinrich Graetz's Geschichte der Juden, which Deutsch relied upon but also criticized (Deutsch, 1917a). Whereas others translated (but truly revised) Graetz's history to include extra material, Deutsch produced another kind of singular history which could be 'rewritten' at will (cf. Blutinger, 2003). Alongside all this, Deutsch's index is endowed with a certain earnestness, based on his personal belief in the pursuit of historical truth and produced by an individual scholar as opposed to a well-equipped and provisioned office or research group. It consequently stands out as inherently paradoxical, at an intersection of common notetaking practices and dreams of monumentality gone awry. It holds within it an inherent tension between the dream of systemic knowledge and the individualized nature of the cards that encode the researcher's priorities and personality. It represents a dream of total, verified history against the reality that each card marked a point of skepticism. It was simultaneously an engine of individual memory and an object that proved a point of memorialization, a factor to which we will return when we consider the index's afterlife. If it defies characterization, one way to conceptualize it is as a liminal object that transverses both chronological and conceptual boundaries in the attempt to overcome information overload.

Most plainly, Deutsch's index falls at a curious chronological crossroads. Much recent scholarship on card indexes and factuality falls into one of two modes: first, scholars have excavated early modern indexes, catalogues, and the pursuit of 'facts' to demonstrate information overload prior to the contemporary 'information age' as well as the premodern attempts to counteract the firehose of books and other information (Blair, 2010; Krajewski, 2011; Müller-Wille and Scharf, 2009; Poovey, 1998;

Zedelmaier, 1992). All the same, a range of figures have tracked and critiqued the trajectory of the 'noble dream' of historical and scientific 'objectivity' (Appleby, Hunt and Jacob, 1994: 241-70; Daston and Galison, 2007; Novick, 1988). Certainly, by Deutsch's time, indexes were by no means revolutionary tools, though the magnitude of some of these projects, from Deutsch to Otlet, was unprecedented. Likewise, the ideas on 'facts' and 'objectivity' were on the verge of heavy criticism, whether by historians who, following Karl Lamprecht, called for historical synthesis in addition to source criticism, or from the side of the natural sciences and especially physics where both Relativity and Quantum Mechanics would translate the epistemological challenge from Plato to Kant from theory into practice. One might then say that Deutsch's index developed at the height of the pursuit of historical objectivity and constituted a tool of historical research not particularly innovative or limited to him alone, given that the use of notecards was encouraged by so many figures, and it crystallized a positivistic methodology on its way out.

Deutsch's index also highlights everyday practices alongside grand aspiration. Especially when it is placed alongside other remarkable card indexes like Paul Otlet's 'Mundaneum,' which numbered cards in the millions, Deutsch's 70,000 may seem more than mundane but not necessarily notable. By comparison, it might seem almost pedestrian, merely the result of consistently assiduous work over the course of decades. Perhaps counter-intuitively, Deutsch's index merits serious consideration precisely because it presents a product of quotidian research alongside a dream of complete, and completely objective, information. One gets the tactile feel of a once-common mode of research and can consider the possibilities of physical, material knowledge with information literally at one's fingertips, alongside the challenges of organizing such a mass of data. It displays most plainly how attempts at systematic, 'objective' collections of knowledge are highly individual archives of its creator's mind, interests and implicit biases. As a result, his index is simultaneously a relic of research and a reminder of the pitfalls of all such efforts to create systematic knowledge, regardless of the underlying technology – paper, digital or otherwise.

Consequently, the index presents an important case study of everyday research alongside a signpost in a series of attempts to produce total knowledge. Notably, it mirrored attempts around this same time to create total archives that could comprehensively document Jewish history and culture. In 1905 – just as Deutsch began his index in earnest – the Gesamtarchiv der deutschen Juden (General or Total Archive of the German Jews) was established under the leadership of Eugen Täubler, who developed a program to collect all the files of German Jewry. This dream of archival totality was later adopted explicitly and implicitly by a number of Jewish archival efforts in Austria, the USA, and the state of Israel, where the Jewish Historical General Archives (since 1969 the Central Archives of the History of the Jewish People) tried to create what its former director Hadassah Assouline termed a 'central repository of Jewish historical material in the world' (Lustig, 2017: 110-25).¹⁴

Deutsch's index presents an example of big data in an analogue age. Just as it preceded Bush's 'memex', it was a type of total archive reminiscent of Rebecca Lemov's consideration of 1950s 'big science' research projects (Lemov, 2015: 70). Indeed, Deutsch's unrealized dream of collaborative research as a total archive –

however flawed in its conception – hoped to create a universal catalogue of information about Jewish life largely through periodical research. Despite his failure to draft others to help him in the process, he still managed to amass a tremendous amount of information over the course of his lifetime, however cut short. Given that Deutsch saw his scholarship as 'scientific', using the prevailing parlance of the time, it is easy to see his index as akin to Lorraine Daston's discussion of the 'archives' of science that hold research data (Daston, 2017). The index, then, shows how big data is not limited to the digital world or large-scale collaborative projects. Instead, a lifetime of research results in tremendous amounts of notes and knowledge, suggesting the necessity for broad conceptions of big data beyond the specific tools utilized. Certainly, computerization might seem to resolve some of the limitations of systems like Deutsch's, allowing for full-text search or multiple tagging of individual data points, but an exchange of cards for bits only changes the method of recording, leaving behind the reality that one must still determine what to catalogue, how to relate it to the whole, and the overarching system. The seemingly unlimited space of a hard-drive (or the 'cloud') masks the fragility of data systems, which are just as prone to corruption as flimsy paper cards, whereas Deutsch's index, however difficult to locate or utilize in practice, can be read with the naked eye instead of requiring a mediating technology that itself must be preserved. All this is to say, Deutsch's index indicates the inevitable tensions between system and individuality, how efforts to collect information and data on a large scale, regardless of the technology upon which they are inscribed, are inseparable from their creators, whether individuals or institutions, and the modes of organizing information that they favor. Simultaneously, it showcases how little actually has changed with the rise of digital platforms, where some scholars have sought to build software edifices to emulate card index systems or speak of 'paper-based tangible interfaces' for research (Döring and Beckhaus, 2007; Lüdecke, 2015).

Deutsch's index also illuminates a landscape of memory and its multiple meanings. In one way, it showcases the possibility of a prosthesis that allowed for the 'feats' of memory that made him famous in his time, not dissimilar to others like Robert Boyle whose work was not necessarily enabled by inherent mental strengths but notetaking techniques that served as secondary or external memory (Yeo, 2010). It is reminiscent of Pierre Nora's suggestion that physical objects and especially the written word constitute 'archival memory,' a secondary or 'prosthesis' memory (Nora, 1989: 14). If Nora wrote primarily about the deterioration of communal memory, Jacques Derrida more clearly made the connection between archives and prostheses when he glossed Freud's 'mystic pad' as a kind of psychological prosthesis (Derrida, 1995: 16). It was thus both an extensible personal memory, and closely tied to how Deutsch's students and colleagues remembered him and his erudition, symbolizing individual genius and a type of mechanical objectivity and 'scientific' scholarship.

This card index thus constitutes an unstable corpus: simultaneously a grand archive of the mind and erudition of a scholar renowned in his time, but also 'mere chips from his workshop' that individually do not amount to much. It demonstrates the multivalence of memory and how it is enabled by objects, which also embody memorialization, thereby highlighting how such indexes should not necessarily be elevated as monuments to 'heroic' scholarship. Instead, the index and its reception by Deutsch's students and the public – in accolades as well as in remembrances both personal and published – demonstrates how a vision of the scholar's activity had wide-ranging ramifications. It shows the liminality of the idea and the object: the ascendancy of card indexes, on the one hand, and the decline of 'facts', alongside how his index was almost lost but some of his core ideas persevered: we face the irony of the transformation of historical practice and philosophy, with the ascendancy of postmodernism, alongside the preservation in the public imagination of the historian and his 'facts'.

The curious afterlife of Gotthard Deutsch and his card index

All this turns our attention to what is perhaps the most curious and distinctive aspect of Deutsch's index, the fact that it survived. One might expect the story of Deutsch's index would end with his untimely passing, given that no one else worked with him on the project. However, the index's fascinating afterlife, following two divergent trajectories, brings forward far-reaching and unexpected repercussions and raises important issues about the endurance of Deutsch's ideas about history. Shortly after Deutsch's death the alumni of the Hebrew Union College purchased his index for the seminary's library.¹⁵ Though they hoped it might be utilized, it was left to languish in the library's basement, hidden and mostly unused for nearly a century. Even as the index fell into obscurity and Deutsch faded from public consciousness and institutional memory, his hyperempiricist bent lived on through students and especially his protégé Jacob Rader Marcus, thereby into the field of American Jewish history, which Marcus pioneered.

Marcus first came to Cincinnati in 1911, at the age of 15, beginning his rabbinical studies at HUC, where he would remain as an instructor and professor from his 1920 ordination until his death in 1995 at the age of 99. In later years, Marcus described Deutsch rightly as a debunker and an annalist – descriptors which Deutsch himself had tried to differentiate himself from when he described his 'philosophy of history' (Chyet, 1958: 6; Deutsch, 1900b: 166). But despite Marcus' attempt to distance himself from his teacher, Deutsch's influence was profound. Marcus, who established the American Jewish Archives at HUC in 1947, clearly looked up to Deutsch, whom he once called 'my history god-father'.¹⁶ As a social historian, Marcus took on Deutsch's interest in the personal and anecdotal. Marcus' notion of the 'omniterritoriality' of Jewish history - by which he meant that Jews were a part of history around the world, and should remain that way, as he understood diaspora and dispersion to be a boon to continued Jewish existence - mirrored Deutsch's emphasis on Jewish history around the world with a mixture of Diasporism (Marcus, 1989, among others; Lustig, 2017: 302). Marcus also espoused an intense interest in facts. In his 1938 source reader The Jew in the Medieval World, Marcus espoused his hope that the 'facts might speak for themselves' (Marcus, 1938: vii). In 1951, he wrote of the aim of historians 'to understand the facts as they really were' and the challenge of 'the expectation that the emergence of a single new fact, hitherto unknown to him, will shatter a cherished thesis' (Marcus, 1951: I, viii, xiv). Twenty years later, Marcus explained his aim to 'give the facts and document them' (Marcus, 1970: I, xxiii). Further, he spoke of the 'historian's credo' that 'the fact scrubbed clean is more eternal than perfumed or rouged words' (Marcus, 1957: 466).¹⁷ And if Marcus made reference in the 1940s to his teacher's 'constantly reiterated

motto' of 'de minimis curat historicus', four decades later his own student and associate Stanley Chyet remarked that it was Marcus's dictum too (Marcus, 1946: 72; Peck and Sarna, 1986: 8). As such, through his student, Deutsch's empiricism lived on long past his own passing and was breathed into another field far beyond his own – American Jewish history – whose standard Marcus set for a half century by calling for the production of a 'scientific' history.

Marcus also showed an affinity for Deutsch's methods. As a graduate student, he maintained a card index of his own. When Marcus's friends wrote of his travels abroad, they declared that 'When we think of that card index by now we shudder. What proportions it must have assumed'.¹⁸ In the 1930s, Marcus hired assistants to peruse periodicals for references to the USA (Peck and Sarna, 1986: 56). It seems someone kept Deutsch's index updated; under the heading BLOOD ACCUSATION, a handwritten card referenced a 1960s publication, and three subsequent cards clearly used a modern typesetting. Most striking, though, was Marcus' appropriation of Deutsch's cards when he extracted those relating to America, installing them in the reading room of the American Jewish Archives where they remain to this day. In doing so, Marcus enshrined Deutsch at the center of the physical space. It also reflected Marcus' developing vision of American Jewish history, giving form to his conception of the division of Jewish history between the western hemisphere and the old world of Europe, a kind of Monroe doctrine that also reflected his own interest in seeing the Central and South American Jewish communities within the USA's sphere of influence. The cards that Marcus took to the new reading room reflected this hemispheric vision, not just of the USA but also South America and even the Pacific Rim such as New Zealand.

The two sections of the index, then, went different ways: when Marcus opened 'branches' of his archive in Los Angeles, New York, and Jerusalem, he microfilmed portions of his archival collections and also the Americana part of Deutsch's cards. By contrast, the remaining cards were left to languish at Hebrew Union College's Cincinnati library. When the current author began investigating this peculiar object of history and research, the library staff informed him that the index had been lost, a fate shared with not a few library catalogues, which to the chagrin of some are being replaced by computerized databases (Baker, 1994, 2001). Deutsch's index was only unearthed after an extensive search through the library's hidden corners and corridors, whereas Deutsch's Graetz volumes were easily located. It is a vast distance from the fate of other notable card indexes, for instance Gershom Scholem's card catalogue of mystical texts and terms which has been furnished with its own reading room at the National Library of Israel; and a similar story can be told of Niklas Luhmann's index at Bielefeld. At the same time, although Deutsch fell into institutional and intellectual obscurity, one can identify in his students and especially Marcus – who taught at HUC until nearly his dying day in 1995 – how a vision of the professional historian modeled on Deutsch was catapulted from the 19th century nearly to the threshold of the 21st. And so, one could say that Deutsch's index followed two trajectories. If the object itself was almost consigned to oblivion, its cards – or rather, the ones Marcus microfilmed – can be accessed around the world. And when Deutsch fell into obscurity, he still had an outsized if indirect influence on American Jewish history, a field far-flung from his own passions.

Conclusion

Deutsch and his catalogue may have been mostly forgotten, but they should not be brushed aside. His card index is a testament to one man's assiduous efforts and to the dangers of the accumulation of data over the production of synthetic scholarship. It highlights the possibilities of prostheses of memory, but also presents a cautionary tale reinforcing the importance of looking beyond minute details to the big picture. For whatever reason, Deutsch was unable to pull himself away from the bench of his workshop to produce the greater work. All the same, even with Deutsch's orthodox adherence to empiricism and positivistic methods, his project was in certain ways particularly forward-thinking: he recognized the historian's task to discern which 'facts' were important, presaging Carr's comments that historians create their own facts. Further, Deutsch's motto 'de minimis curat historicus' was not just about correcting others but also gaining access to the average person, a generation before the rise of social history and microhistory. And his card index represented an early attempt at total archives. Deutsch's challenge – that his notes were unwieldy and there was too much to read – would certainly strike a chord among scholars both before and after him. In the final analysis, Deutsch's catalogue presents a curious relic of research placed at an inflection point between a high tide of a vision of facts and the opening of a new information age based on cards. It was caught between big history and small facts, system and unsystem, and scholarly production and unproduction. The index highlights the changing scholarly view of 'objectivity', 'facts', and history 'as it really was', alongside an enduring popular vision of the historian's task and persona and the possibilities of big data, but also centers the challenge of seeing such indexes as predecessors to the possibilities of the Internet but keeping the problematic positivism that imbued them in perspective.

Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/ or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Jason Lustig D https://orcid.org/0000-0002-2077-9520

Notes

- 'Gotthard Deutsch, Divine and Writer, Dies of Pneumonia', 21 Oct. 1921, American Jewish Archives (AJA), Cincinnati, OH, MS-123 Oversize Box 313; Chicago Rabbinical Association, 'Gotthard Deutsch Memorial Resolutions', 31 Oct. 1921, AJA MS-123 1/17.
- 2. Joseph Stolz, 'Memorial Address in Memory of Dr. Gotthard Deutsch', 11 February 1922, AJA Gotthard Deutsch Nearprint File.
- 3. 'Dr. Deutsch (Air: Casey Jones)', AJA Gotthard Deutsch Nearprint File.
- 4. Gotthard Deutsch, 'Last Will and Testament', 1914, AJA MS-123 6/3.

- Chicago Rabbinical Association, 'Gotthard Deutsch Memorial Resolutions', 31 Oct. 1921, AJA MS-123 1/17.
- 6. Gotthard Deutsch, 'Current Events', 7 Oct. 1921, AJA MS-123 11/4.
- 7. Gotthard Deutsch, 'Preface', Jul. 1910, American Jewish Archives MS-123 6/12.
- 8. Gotthard Deutsch, 'The Epochs of Jewish History', 1894, AJA MS-123 Nearprint File.
- Gotthard Deutsch, 'A System for Collecting Material for Jewish History and Literature', Hebrew Union College – Jewish Institute of Religion, Klau Library Special Collections, A-2014 140; Deutsch, 'A Plan for Recording Systematically the Results of Source Reading in Jewish History', HUC–JIR, Klau Library, Freidus AM D48.
- 10. Jacob Rader Marcus, Diary Entry, Jan. 17, Jan. 22, 1921, AJA MS-210 2/94.
- Samuel Schulman, 'In Memory of Dr. Gotthard Deutsch', *American Isra*elite, Mar. 2, 1922; 'Gotthard Deutsch, Divine and Writer, Dies of Pneumonia', 21 Oct. 1921, AJA MS-123 Oversize Box 313.
- 'Dr. Deutsch's Legacy', *American Hebrew*, 28 Oct. 1921; 'Der Historiker Gotthard Deutsch', *Jüdische Rundschau*, 18 Nov. 1921, AJA MS-123 Oversize Box 313
- 13. AJA, PC-964.
- Hadassah Assouline, 'Central Archives for Jewish History' (speech), 1984. Audio cassette, Hebrew Union College, Klau Library Special Collections (Cincinnati, OH), Cas 452.
- 'HUC Alumni Meeting: To Purchase Historical Card Index by Dr. Deutsch for College Library', *American Isra*elite, 3 August, 1922.
- 16. Ibid.
- 17. Jacob Marcus, 'The Historian's Credo', 1958, AJA Marcus Nearprint File, Box 2.
- 18. 'Student Activities', HUC Monthly, Nov. 1922, Jun. 1923.

References

Adams, H. B. (1886) Methods of Historical Study. Baltimore: Johns Hopkins University.

- Appleby, J., Hunt, L. and Jacob, M. (1994) *Telling the Truth About History*. New York: W. W. Norton.
- Baker, N. (1994) 'Discards', New Yorker, April: 64-86.
- Baker, N. (2001) Double Fold: Libraries and the Assault on Paper. New York: Random House.
- Bambach, C. (1995) Heidegger, Dilthey, and the Crisis of Historicism. Ithaca: Cornell University Press.
- Beiser, F. (2011) The German Historicist Tradition. New York: Oxford University Press.
- Benjamin, W. (2016[1986]) One Way Street, trans. E. Jephcott. Cambridge, MA: Harvard University Press.
- Bernheim, E. (1889) *Lehrbuch der Historischen Methode* [Manual of Historical Methods]. Leipzig: Duncker & Humblot.
- Blair, A. (2010) Too Much to Know: Managing Scholarly Information Before the Modern Age. New Haven: Yale University Press.
- Blutinger, J. (2003) 'Writing for the Masses: Heinrich Graetz, the Popularization of Jewish History, and the Reception of Jewish Nationalism', Ph.D. thesis, Los Angeles.
- Borges, J. L. (1964) 'Funes the Memorious', trans. J. E. Irby, in D. A. Yates and J. E. Irby (eds) Labyrinths: Selected Stories and Other Writings. New York: New Directions, pp. 59–66.

- Boyd, R. W. (2013) 'From the Index Card to the World City: Knowledge Organization and Visualization in the Work and Ideas of Paul Otlet', in A. Slavic, *et al.* (eds) *Classification and Visualization-Interfaces to Knowledge*. Würzburg: Ergon Verlag, pp. 11–50.
- Brav, S., ed. (1965) *Telling Tales Out of School: Seminary Memories of the Hebrew Union College–Jewish Institute of Religion.* Cincinnati: Alumni Association of the HUC–JIR.
- Brown, L. (1919) 'G. Deutsch, Master of Jewish History', HUC Monthly, February.
- Burke, C. (2014) *Information and Intrigue: From Index Cards to Dewey Decimals to Alger Hiss.* Cambridge: MIT Press.
- Bush, V. (1945) 'As We May Think', The Atlantic, July: 101-8.
- Chyet, S. (1958) 'Jacob Rader Marcus: A Biographical Sketch', *Essays in American Jewish History*. Cincinnati: American Jewish Archives, pp. 1–22.
- Collingwood, R. G. (1943) The Idea of History. Oxford: Clarendon Press.
- Daston, L. (2002) 'Why Are Facts Short?', in L. Daston, et al. (eds) A History of Facts. Berlin: Max-Planck-Institut f
 ür Wissenschaftsgeschichte, pp. 5–22.
- Daston, L, ed. (2017) Science in the Archives: Pasts, Presents, Futures. Chicago: University of Chicago Press.
- Daston, L. and Galison, P. (2007) Objectivity. Cambridge, MA: MIT Press.
- Derrida, J. (1995) 'Archive Fever: A Freudian Impression', Diacritics 25(2): 9-63.
- Deutsch, G. (1892) 'A Defect in the Development of Modern Judaism,' *American Israelite*, 7 April.
- Deutsch, G. (1897) Philosophy of Jewish History. Cincinnati: Bloch.
- Deutsch, G (1898a) Andere Zeiten. Eine Erzählung aus dem jüdischen Leben der jungsten Vergangenheit [Other Times: A Tale from Jewish Life of the Recent Present]. Berlin: Albert Katz.
- Deutsch, G. (1898b) 'Minima Curat Historicus', in G. Deutsch (ed.) Scrolls: Essays on Jewish History and Literature, and Kindred Subjects, vol. 1. New York: Bloch, 1917, pp. 99–113. Originally in The Reform Advocate, 31 December, 1898; 4 February. 1899.
- Deutsch, G. (1898c) 'Singer's Encyclopedia of the Jewish Race', American Hebrew, 8 August.
- Deutsch, G. (1900a) 'Everybody Says So', Jewish Comment, 19 October.
- Deutsch, G. (1900b) 'Philosophy of Jewish History', HUC Journal, June: 166-76.
- Deutsch, G. (1901) 'The Library of the Hebrew Union College', American Israelite, 10 January.
- Deutsch, G. (1903a) 'A Suggestive Test', American Israelite, 24 December.
- Deutsch, G. (1903b) Unlösbare Fesseln. Eine Erzählung aus dem jüdischen Leben der Gegenwart [Permanent Bonds: A Tale from the Jewish life of the Present]. Frankfurt am Main: J. Kauffmann. Deutsch, G. (1904a) Memorable Dates in Jewish History. New York: Bloch.
- Deutsch, G. (1904a) Memorable Dales in Jewish History. New York. Bioch.
- Deutsch, G. (1904b) 'Memorable Dates in Jewish History', *Hebrew Union College Annual* 1: 285–444.
- Deutsch, G. (1904c) 'The Year 1903 in Jewish History', Hebrew Union College Annual 1: 37-54.
- Deutsch, G. (1905a) 'De Encyclopaedia judaica', American Israelite, 19 October.
- Deutsch, G. (1905b) 'Zunz's Practical Judaism: A Lesson on the Value of Anecdotes in History', American Israelite, 28 September.
- Deutsch, G. (1906) 'A Plan for Co-Operative Work in Collecting Material for Encyclopedic Studies in Jewish History and Literature', *CCAR Yearbook* 16: 241–50.
- Deutsch, G. (1907a) 'Report of the Committee on Card Index', CCAR Yearbook 17: 115.

- Deutsch, G. (1907b) 'Supplementary Explanations to the Plan for Co-Operative Work in Collecting Material for Encyclopedic Studies in Jewish History', *CCAR Yearbook* 17: 259–70.
- Deutsch, G. (1908a) Israel Bruna: A Historical Tragedy in Five Acts. Boston: Gorham Press.
- Deutsch, G. (1908b) 'Report on the Committee on Card Index', CCAR Yearbook 18: 51-2.
- Deutsch, G. (1910a) 'Books and No End: A Suggestion to the Council, Union of American Hebrew Congregations', *American Israelite*, 29 December.
- Deutsch, G. (1910b) 'Instruction in Jewish History', CCAR Yearbook 20: 347-61.
- Deutsch, G. (1910c) 'Report of the Committee on Contemporaneous History', *CCAR Yearbook* 20: 83–5.
- Deutsch, G. (1910d) The History of the Jews. New York: Bloch.
- Deutsch, G. (1915) '1815 to 1915', American Israelite, 22 July.
- Deutsch, G. (1916) 'De minimis curat historicus', American Israelite, 3 February.
- Deutsch, G. (1917a) 'Heinrich Graetz: A Centenary', CCAR Yearbook 27: 338-64.
- Deutsch, G. (1917b) 'Siyum', American Israelite, 8 March, 15 March.
- Deutsch, G. (1921) 'A Review of the Leading Events in the Jewish World', *The Sentinel*, 30 September.
- Dickinson, R. L. (1894) 'The Card Index or Card Catalogue as Adapted to History-Taking in Private Practice', *Medical Record*, 29 December.
- Dobbert, G. A. (1968) 'The Ordeal of Gotthard Deutsch', *American Jewish Archives Journal* 20(2): 129–55.
- Döring, T. and Beckhaus, S. (2007) 'The Card Box at Hand: Exploring the Potentials of a Paper-Based Tangible Interface for Education and Research in Art History'. Proceedings of the First International Conference on Tangible and Embedded Interaction, Baton Rouge, Louisiana, February 15-17, 2007. New York, ACM, pp. 87–90.
- Droysen, J. G. (1858) *Grundriβ der Historik* [Outline of the Principles of History]. Jena: Friedrich Frommann.
- Engelhardt, A. (2014) Arsenale jüdischen Wissens. Zur Entstehungsgeschichte der 'Encyclopaedia Judaica' [Arsenals of Jewish Knowledge: A History of the Formation of the 'Encyclopaedia Judaica]. Göttingen: Vanderhoeck & Ruprecht.
- Fling, F. M. (1920) The Writing of History: An Introduction to Historical Method. New Haven: Yale University Press.
- Heller, J. (1916) 'Dr. Deutsch and Jewish History', HUC Monthly, May.
- Heller, M. (1921) 'Professor Gotthard Deutsch', American Israelite, 20 October.
- Hertzman, R. (1985) 'An American Rabbi: A Translation of Four Essays from Max Raisin's Dapim MiPinkaso shel Rabi', Rabbinical thesis, Cincinnati.
- Hill, E. A. (1900) 'On a System of Indexing Chemical Literature; Adopted by the Classification Division of the U.S. Patent Office', *Journal of the American Chemical Society* 22(8): 478–94.
- Holtzberg, A. (1916) 'The History of the Zionist Movement from Zvi Hirsch Kalischer to Theodore Herzel [*sic*]', Rabbinical thesis, Hebrew Union College, Cincinnati.
- Krajewski, M. (2011) Paper Machines: About Cards and Catalogues, 1548–1929. Cambridge: MIT Press.
- Krajewski, M. (2013) 'Paper as Passion: Niklas Luhmann and His Card Index', in L. Gitelman (ed.) *Raw Data' is an Oxymoron.* Cambridge, MA: MIT Press, pp. 103–20.

- Langlois, Ch. V. and Seignobos, Ch. (1900) *Introduction aux études historiques* [Introduction to the Study of History], 4th ed. Paris: Libraire Hachette.
- Latour, B. (1986) 'Visualisation and Cognition: Drawing Things Together', in H. Kuklick (ed.) Knowledge and Society: Studies in the Sociology of Culture Past and Present. Greenwich, CT: JAI Press, VI: 1–40.
- Leiber, J. (1917) 'Jewish Journalese: A Critical Review of Dr. Deutsch's Essays on Jewish History and Literature', *American Israelite*, 15 November.
- Lemov, R. (2015) Database of Dreams: The Lost Quest to Catalog Humanity. New Haven: Yale University Press.
- L. F. (1919) 'Greetings', HUC Monthly, February.
- Liebes, Y. (n.d.) 'Scanning of Gershom Scholem's Milon HaZohar Card Index.' http://web.nli.org. il/sites/NLI/English/collections/jewish-collection/scholem/scholem-card-catalog/Documents/ Yehuda-Liebes/ZOHAR-Yehuda-Liebes.pdf. Accessed 8 November, 2017.
- Lüdecke, D. (2015) 'Introduction to Luhmann's Zettelkasten-Thinking and its Technical Implementation.' https://strengejacke.files.wordpress.com/2015/10/introduction-into-luh manns-zettelkasten-thinking.pdf. Accessed 6 August, 2018.
- Luhmann, N. (1992) 'Kommunikation mit Zettelkästen. Ein Erfahrungsbericht' [Communication with Zettelkasten: A Field Report], in N. Luhmann (ed.) Universität als Milieu. Bielefeld: Cordula Haux, pp. 53–61.
- Luhmann, N. (2000) 'Biographie, Attitüden, Zettelkasten' [Biography, Attitudes, Zettelkaseten], in N. Luhmann (ed.) Short Cuts. Frankfurt am Main: Zweitausendeins, pp. 7–40.
- Lustig, J. (2017) "A Time to Gather": A History of Jewish Archives in the Twentieth Century', Ph.D. dissertation, University of California, Los Angeles.
- Marcus, J. R. (1938) The Jew in the Medieval World. Cincinnati: Sinai Press.
- Marcus, J. R. (1946) 'Report of the Committee on Contemporaneous History,' CCAR Yearbook 56: 72–91.
- Marcus, J. R. (1951) Early American Jewry, 2 vols. Philadelphia: Jewish Publication Society of America.
- Marcus, J. R. (1957) 'Address of the President', Publications of the American Jewish Historical Society 46(4): 465–6.
- Marcus, J. R. (1970) The Colonial American Jew, 1492–1776, 3 vols. Detroit: Wayne State University Press.
- Marcus, J. R. (1989) 'Testament: A Personal Statement', CCAR Yearbook 99: 111-14.
- Margolis, M. (1921) 'Gotthard Deutsch: A Tribute', Jewish Exponent, 28 October.
- Melamed, S. M. (1921) 'Dr. Gotthard Deutsch', The Sentinel, October.
- Mendelsohn, S. F. (1916) 'Professor Gotthard Deutsch', HUC Monthly, May.
- Müller-Wille, S. and Scharf, S. (2009) 'Indexing Nature: Carl Linnaeus (1707–1778) and his Fact-Gathering Strategies'. Working Papers on the Nature of Evidence, no. 36/08.
- Nietzsche, F. (1874) *Vom Nutzen und Nachtheil der Historie für das Leben* [On the Use and Abuse of History for Life]. Leipzig: E. W. Fritzsch.
- Nora, P. (1989) 'Between History and Memory: Les Lieux de Mémoire', *Representations* 26: 7–24.
- Novick, P. (1988) That Noble Dream: The 'Objectivity Question' and the American Historical Profession. Cambridge: Cambridge University Press.

- Peck, A. J. and Sarna, J. D. (1986) Biz hundert un tsvantsik! A Tribute Volume for Dr. Jacob Rader Marcus On the Occasion of His 90th Birthday. Cincinnati: Hebrew Union College – Jewish Institute of Religion.
- Poovey, M. (1998) A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society. Chicago: University of Chicago Press.
- Raisin, M. (1952) Great Jews I Have Known. Freeport, NY: Books for Libraries Press.
- Rubin, A. (2004) 'Jewish Nationalism and the Encyclopaedic Imagination', *Journal of Modern Jewish Studies* 3(3): 247–67.
- Saxer, D. (2014) Die Schärfung des Quellenblicks. Forschungspraktiken in der Geschichtswissenschaft, 1840–1914 [Sharpening Historical Sources: Research Practices in the Science of History, 1840–1914]. Oldenbourg: Dr Gruyter.
- Schulman, S. (1922) 'In Memory of Dr. Gotthard Deutsch', American Israelite, 2 March.
- Singer, I. (1921) 'Human Encyclopedia Passes Away', American Hebrew, 21 October.
- Smail, D. (2014) 'Neurohistory in Action: Hoarding and the Human Past', Isis 105(1): 110-22.
- Stolz, J. (1921) 'Gotthard Deutsch', B'nai B'rith News, October.
- Stolz, J. (1922) 'Bernard Felsenthal An Appreciation', CCAR Yearbook 32: 255-66.
- Yeo, R. (2010) 'Loose Notes and Capacious Memory: Robert Boyle's Note-Taking and its Rationale', *Intellectual History Review* 20(3): 335–54.
- Zedelmaier, H. (1992) *Bibliotheca universalis und bibliotheca selecta. Das Problem der Ordnung des gelehrten Wissens in der frühen Neuzeit* [Bibliotheca universalis und bibliotheca selecta: The Problem of Ordering Scholarly Knowledge]. Cologne: Böhlau Verlag.
- Zedelmaier, H. (2002) 'Buch, Exzerpt, Zettelschrank, Zettelkasten' [Book, Excerpt, Slip Cabinet, Zettelkasten]. Archivprozesse: Die Kommunikation der Aufbewahrung. Cologne: DuMont Literatur und Kunst Verlag, pp. 38–54.

Author biography

Jason Lustig is a Harry Starr Fellow in Judaica at Harvard University's Center for Jewish Studies, and the Gerald Westheimer Early Career Fellow at the Leo Baeck Institute. He completed his PhD at UCLA in 2017, where his dissertation examined 20th-century struggles over Jewish archives and the control of culture and memory in Germany, the USA and Israel/Palestine.