The Talmud, the major work of Jewish law and lore, has much in common with the Internet. They are both media of community-created knowledge that foster interactive, associative, multidirectional thinking. The Talmud took shape through the on-going global dialogue of hundreds of commentators spanning centuries. The media ecology of the Internet shares a common structure with the ancient Hebraic form of dialogic discourse that resulted in the multilinear typographic design of Talmud pages set in Hebrew typefaces. This multi-linear design stands in contrast with unilinear design of most printed books in European languages that promote a structure of consciousness alien in an era of digital technologies shaping a networked world.

The Talmud consists largely of discussions beginning more than two millennia ago that arose from daily life in Jewish communities of Babylonia and the Land of Israel until its final editing in the sixth century. With the invention of moveable-type printing in the 15th century, individual volumes of Talmud were published in Portugal and Italy with Hebrew typefaces in a multilinear design that contrasted with the unilinear typography of the Guttenberg Bible translated into Latin and printed in Germany. The full 63 tractates of Talmud, 2.5 million words printed on 5,894 folio pages, was first set for printing in 16th century Venice. A typical page has a central patch of Hebrew text followed by a text in Aramaic developing the topic. Surrounding these two texts are commentaries and commentaries on the commentaries augmented by diagrams and references.
When I was a professor at Columbia University, techno prophet Marshall McLuhan came down from Toronto to lecture there. He talked about how the linear pattern of information resulting from print technology limited the thought patterns of people who learned from printed books. Word follows word, line follows line, paragraph follows paragraph, page follows page, chapter follows chapter, in a single necessary order from the first page to last. Learning through a medium that is a one-way street prevented creative, flexible, associative, open-ended, multidirectional, and multidimensional thought. Instead of just being authoritative, books became authoritarian, demanding thinking in straight lines from a fixed point of view. The book medium became a stronger message than its content. Designed to be read in privacy, in seclusion from others, the book ended dialogue. It conferred the values of isolation, detachment, passivity, and non-involvement.

I invited McLuhan to my office to show him how the Jewish dialogic mindset, which could not tolerate unidirectional thought, used print technology to design multilinear books. I took a volume of Talmud off my shelf and showed him its non-linear design. I opened it to page 2 (there is no page 1) and pointed to the patch of text in the center of the page that starts with the Mishnah, written in Hebrew, followed by the Gemara, in Aramaic. On one side is a column of Rashi’s commentary (11th century France) in a different alphabet from the central text. On the other side is a column of Tosafot (Rashi’s grandchildren) followed by references to Rashi in Tosafot. In a narrow fourth column next to Tosafot, stacked vertically, are four different commentaries on commentaries that span centuries of dialogue over time and space. Sometimes, explanatory diagrams are printed on the side. In the margin are numerous references to biblical passages and to other books.

Rabbi Adin Steinsaltz describes the Talmud, the recorded dialogue of generations of scholars, as having all the characteristics of a living dialogue. Freshness, vivid spontaneity, and
acute awareness of every subject permeate every argument and discussion. The spirit of life breathes on every single page.\(^3\) It is not a set of books to be read in quiet solitude. We give life and continuity to the dialogue that began millennia ago by engaging the hundreds of voices talking across the folio pages in active dialogue with a learning partner. The two learners, a \_hevrutah_, enter a page and move around within it while arguing with each other and calling for support from all the scholars before them. They can begin their learning on any of its 5,894 pages. The multivolume Talmud has no begin and no end. The \_hevrutah_ can jump around within a page, between pages, between different Talmud tractates, look into the Bible, kabbalistic texts, or any other sources. A study hall in a yeshiva filled with many learning diads is a busy, dynamic, noisy environment, quite different from the eerie silence of a library for linear books.

When I began surfing the World Wide Web, it seemed a familiar place to me. I felt I had been there before. Talmud study had prepared me for its vast multidirectional options and its non-sequential organization. I felt at home seeing home pages that had an uncanny resemblance to Talmud pages. As a member of the panel, “Toward an Aesthetic for the 21\(^{st}\) Century: Networking, Hypermedia, and Planetary Creativity,” at the 1990 conference of the College Art Association, I explored this confluence between traditional Jewish media experiences and encountering the emerging Internet.\(^4\) A decade later, Jonathan Rosen wrote in *The Talmud and the Internet: A Journey between Worlds*:

I can’t help feeling that in certain respects the Internet has a lot in common with the Talmud. The Rabbis referred to the Talmud as a *yam*, a sea – and though one is hardly intended to ‘surf’ the Talmud, something more than oceanic metaphors links the two verbal universes. Vastness and an uncategorizable nature are in part what define them both…. The Hebrew word for tractate is *masechet*, which means, literally, “webbing.” As with the World Wide Web, only the metaphor of the loom, ancient and inclusive, captures the reach and the randomness, the infinite interconnectedness of words…. I take comfort in thinking that a modern technological medium echoes an ancient one.\(^5\)
Canadian professor Eliezer Segal goes one step further. He uses the new medium to explicate the old. He created an interactive Image-Map site of a Talmud page, www.acs.ucalgary.ca/~esegal/TalmudPage.html, to serve as a port of departure on a voyage through centuries of vital dialogue. The visitor to his site can click on any portion of the Talmud page image and be linked to a description of that patch of text. He explains the contents and purposes of the text in English, also describing when and where that patch of text was composed. The site visitor joins a community of explorers who weave learning through time and space.6

There are groups of learners worldwide who study one page of Talmud together every day completing the entire Talmud in seven years. To mark the end of the seven-year cycle and the beginning of the next cycle, the many daf yomi (a page a day) learning groups throughout the New York area pack Madison Square Garden in celebration. Unlike a book by a single author read alone in silence, the Talmud is a collaborative enterprise that creates community and continuity. There are also cybercomunities of daf yomi learners. A Google search for “daf yomi” in 2003 yielded 6,720 sites and Yahoo yielded 5,540 sites. Five years later, a Google search yielded 202,000 sites and Yahoo 869,000 sites.7 In English we say, “he’s an educated man,” in past tense. The Hebrew equivalent, talmid hakham, means “wise learner,” one whose learning is daily and lifelong.

In the on-line magazine, Computer-Mediated Communication, Rensselaer Polytechnic Institute professor David Porush writes that the Talmud is an early example of hypertext.

A page of Talmud is structured around a single text surrounded by concentric layers of commentary and commentary on commentary. By form and content, it announces the unfinished quality of constructing knowledge and the collective construction of shared values. Even in its layout on the page, the Talmud suggests a kind of time and space
destroying hyper textual symposium rather than an authoritative, linear, and coherent pronouncement with a beginning and ending written by a solitary author who owns the words therein…. The notion of private self, or the notion of singular origin of knowledge, pales into insignificance in the face of this Talmudic-hyper textual-Internet-like vision of communally-constructed knowledge.8

Not only the typographic design of the Talmud page has relevance in the postmodern era, but the content also has a contemporary ring in the current redefinition of art. Columbia University Professor Arthur Danto proposes that we are experiencing “The End of Art” as visual perception of surface gives way to conceptual grasp of inner significance. In Beyond the Brillo Box: The Visual Arts in Post-Historical Perspective, 9 he discusses how Andy Warhol’s 1964 exhibition at the Stable Gallery in New York marks the end of art. In the art gallery, Warhol stacked boxes on which he had screen-printed the Brillo logo. They looked identical to the cartons of Brillo soap pads that we see in supermarket aisles. We could no longer see the difference between Brillo Boxes (the work of art) and Brillo boxes (the mere real things). Warhol taught that there is no way of telling the difference by merely looking. The history of Western art as a progressive historical narrative of one art style superseding a previous style came to an end.

I suggest that what we are witnessing is not the end of art, but the end of art based upon a Hellenistic structure of consciousness revived in the Renaissance. The end of art calls for a redefinition of art for the future that flows from a Hebraic structure of consciousness. This contemporary paradigm shift from the Hellenistic to the Hebraic roots of Western culture can be seen in the confluence between Danto’s post-historical perspective and Talmudic discussions centuries ago. Danto’s radical new proposal that concept and context rather than visual appearance gives meaning to images and objects was seriously discussed by rabbis dealing with idolatry and Greek aesthetics.10 In the Talmud tractate Avodah Zarah (Strange Worship), rabbis discuss whether found fragments of an image such as the hand or foot of a statue that was
worshipped are prohibited or permitted. If the idol fell down and broke, Rabbi Shimon ben Lakish reasoned, then the hand or foot are permitted because the owner of the idol annuls it by saying, “If it could not save itself, so how could it save me?” Samuel explained that if they were mounted on a pedestal they were still valued as idols. Therefore, the exact same hand or foot would be prohibited.\textsuperscript{11}

The Greek Procles, son of a philosopher, put a question to Rabbi Gamliel who was bathing in a pool in front a large statue of Aphrodite. “If your Torah forbids idolatry, why are you bathing in the Bath of Aphrodite?” The rabbi answered, “I did not come into her domain, she came into mine.” If the statue of Aphrodite was erected and then a pool was made to honor her, it would be forbidden for a Jew to bathe there. However, if the pool was made first and the statue was placed there as an adornment, then it is permitted.\textsuperscript{12} Concept and context determine meaning in the case of the idol fragments and the statue of Aphrodite, like Brillo boxes in an art gallery rather than in a supermarket and a panel of plywood hanging in a museum rather than stacked in a lumberyard. The visual sense alone cannot discern between art and non-art today or between idol and mere decoration yesterday.

The living dialogue of the Talmud coupled with its search for conceptual and contextual significance provides clues for redefining art in a networked world. It can propose new creative options for making web art that simultaneously address postmodern aesthetics and spiritual issues. Rather than work of a lone artist in his studio, it can be the collaborative creation of a community of participants in public spaces (see http://artiststory.blogspot.com/2007/02/polycultural-collaborations.html) or the wikiart of on-line communities (see http://www.wikiartists.us). It can be art that moves from deconstruction to reconstruction and from alienation to caring community. One of the 20\textsuperscript{th} century’s leading theologians, Rabbi Menachem M. Schneerson, The Lubavicher Rebbe, teaches that the sweeping
technological changes we are experiencing today were predicted some two thousand years ago in the Zohar, a major kabalistic text. It describes how the outburst in scientific knowledge and technological advancement would be paralleled by an increase in sublime wisdom or spirituality. Integrating the wisdom of the mind and the wisdom of the soul, which is the role of the artist, can begin to usher true unity into the world.

The divine purpose of the present information revolution, which gives an individual unprecedented power and opportunity, is to allow us to share knowledge – spiritual knowledge – with each other, empowering and unifying individuals everywhere. We need to use today’s interactive technology not just for business or leisure but to interlink as people – to create a welcome environment for the interaction of our souls, our hearts, our visions.

Notes


7 Google and Yahoo searches made 17 August 2003 and 11 November 2008.


11  *Babylonian Talmud: Avodah Zarah*, 41b.


**About the Author**

Mel Alexenberg is head of the School of the Arts at Emunah College in Jerusalem and was professor at Bar Ilan University and Ariel University Center. In USA, he was art professor at Columbia University, head of the art department at Pratt Institute, research fellow at MIT’s Center for Advanced Visual Studies, and dean at New World School of the Arts in Miami. His artworks exploring digital technologies and global systems are in the collections of more than forty museums worldwide. He is author of *The Future of Art in a Digital Age: From Hellenistic to Hebraic Consciousness* (Intellect Books/University of Chicago Press) and *Dialogic Art in a Digital World: Judaism and Contemporary Art* (Jerusalem: Rubin Mass House) and editor of *Educating Artists for the Future: Learning at the Intersections of Art, Science, Technology, and Culture* (Intellect Books/University of Chicago Press).

Ilan Talmud is an associate professor at the Department of Sociology and Anthropology, University of Haifa (Israel). His research interests include economic sociology, network models of social structure, Internet research, youth online, technology and social structure, and the social organization of venture capital. Multilinear typographic design of Talmud pages set in Hebrew typefaces. This multi-linear design stands in contrast with unilinear design of most printed books in European languages that promote a structure of consciousness alien in an era of digital technologies shaping a networked world. The Talmud consists largely of discussions beginning more than two millennia ago that arose from daily life in Jewish communities of Babylonia and the Land of Israel until its final encountering the emerging Internet. A decade later, Jonathan Rosen wrote in The Talmud and the Internet: A Journey between Worlds: I cant help feeling that in certain respects the Internet has a lot in common with the Talmud. The Rabbis referred to the Talmud as a yam, a sea and though one is hardly Talmud and the Internet book. Read 33 reviews from the world's largest community for readers. Our Review: A gemlike book, sharply incised and multifaceted... I assumed this would be an enormous book about the Talmud ON the Internet. No, it's a tiny, idiosyncratic, charming meditation on many contradictory pairs, in particular the Talmud and the Internet. flag like Like see review. Apr 30, 2019 Jeanne rated it it was amazing review of another edition. Shelves: jewish-stuff, non-fiction. This book is less about the Talmud and the Internet and more about using those mediums to talk about the ghosts that haunt us on a personal level as well at the level of all of society.