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HOW PEOPLE LEARN IN JEWISH EDUCATION

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Introduction

Jewish education has taken shape around two primary questions:

1. *What do people need to know in order to live Jewish lives?*
2. *What is the best way to deliver the answer to Question #1?*

Jewish communities have differed greatly in their responses to both with some favoring knowledge that emerges from Jewish textual traditions, while others prefer to emphasize other dimensions of Jewish life, from the embodied to the expressive.

Despite the creativity and diversity of responses to these questions, the focus on these two questions has left a decidedly one-sided Jewish educational landscape informed primarily by concerns about the provision of knowledge: what to teach and how to teach it. The result has been a profoundly lopsided landscape populated by countless pedagogies and curricula, but utterly devoid of any insight or understanding of how people learn in Jewish education.

Although the phrase “Jewish learning” is fairly common, it refers most often either to studying (usually text), or, ironically, to teaching (often text). This report is an attempt to shift the conversation about learning in Jewish education away from these uses and toward a more systematic, research-and-theory-grounded understanding of learning as a distinct Jewish educational phenomenon.¹ It is also an attempt to advance a third question to join the first two: *How do people learn in Jewish education?*

If, as Hebrew etymology indicates, teaching and learning share a common root, what can Jewish education gain by accounting more explicitly for learning as a unique but somewhat independent practice? What are its mechanisms? Its contours? How do people do it? How might a better understanding of how people learn improve Jewish education?

This report extends and deepens Jon Woocher’s proposal for a “learner centered Jewish education” by shifting the focus from an approach to Jewish education that

¹ The two exceptions to this tendency are both fairly recent: Levisohn, Jon A., and Jeffrey Kress, eds. 2018. *Advancing the Learning Agenda in Jewish Education*. Reprint edition. Boston: Academic Studies Press; Zakai, Sivan. 2022. *My Second-Favorite Country: How American Jewish Children Think About Israel*. NYU Press.

caters to *learners* to one guided by an understanding of *learning*.² It offers a challenge, a charge, and a provocation to Jewish educators and supporters of Jewish education to imagine what might happen to the field if we shift its focus from what Jewish education teaches and instead explore how people learn.

What follows is not a theory of learning in Jewish education; for that, we will need a good deal more research. Instead, the report begins with an overview of some basic approaches to general theories of learning to establish a framework for exploring their implications for the field of Jewish education. Hopefully, it will serve as an invitation and an instigation to consider what Jewish education might look like if it places *the ways that people learn* at the center.

Learning in General, Learning in Particular

The human nervous system is wired for detecting and making sense of new stimuli. It is wired for learning. Over millennia, humans learned to detect danger, to hunt, to grow and harvest food, to represent their thoughts in symbols, and organize themselves into social groups. Most of what passes as human understanding and behavior has been learned at some point by someone. Humans are born learners. *Homo eruditio*.

Our understanding of how people learn comes largely from the field of study known as the Learning Sciences.³ This report adopts some insights from that field and suggests that we can learn something (but not everything) about how people learn in Jewish education by studying how people learn other things: to make sense of novel experiences, to fly airplanes, to solve puzzles, or to sell cookies. Understanding some more general principles that guide how people learn will provide insights into the more specific case of how people learn to engage in Jewish life.

² Woocher, Jonathan. 2012. "Reinventing Jewish Education for the 21st Century." *Journal of Jewish Education* 78 (3): 182–226.

³ There are a few books that offer broad surveys of the Learning Sciences. They include Council, National Research. 2000. *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. 2 edition. Washington, D.C: National Academies Press. Esmonde, Indigo, and Angela N. Booker, eds. 2017. *Power and Privilege in the Learning Sciences: Critical and Sociocultural Theories of Learning*. New York: Routledge, Taylor & Francis Group; Nasir, Na'ilah Suad, Carol D. Lee, Roy Pea, and Maxine McKinney de Royston, eds. 2020. *Handbook of the Cultural Foundations of Learning*. Routledge; Sawyer, R. Keith, ed. 2014. *Cambridge Handbook of the Learning Sciences*. 2 edition. New York, NY: Cambridge University Press.

How People Learn: The Mental Model Approach

In a general way, learning can be understood as the process by which people change their minds. Sometimes, minds change in dramatic ways, as in the case of Michael Pollan's excursions into psychedelic therapies or as in the example of people in extremist groups who might undergo a significant shift in their political perspectives.⁴ Most of the time, though, minds change in more subtle ways that result in less spectacular shifts in perspective, like when someone learns how to ride a bicycle or that if $2+2=4$, then $4+4=8$.

The reigning theories from the Learning Sciences generally agree that minds constantly change as people experience new things. The theories go something like this: people develop mental models of the world and how it works. These mental models are called "schema."⁵ Schema allow people to make sense of novel situations based on the imposition of prior knowledge on new experiences.⁶ If I eat a cold, smooth, sweet substance and I am already familiar with the concept of "ice cream," I might conclude that I am encountering a new version of a known experience because I have a schema of edible things within which this new flavor might exist within a series of nested categories (cold > sweet > smooth > in a cone). Those categories and the relationship between them comprise the schema. They operate as frameworks for organizing existing knowledge and assimilating new experiences into what one knows about the world.

For example, someone who grew up in Southern California might primarily associate rain with cold weather. According to what they know from experience, if it is raining, then it is probably cold outside. But new experiences force people to update their schema. Spending a summer in North Carolina exposes this person to the phenomenon of summer rain, forcing them to alter and improve their mental model to accommodate a conception of rain that is not immediately associated with lower temperatures. We can say that this person updated their schema of "weather," or we

⁴ Pollan, Michael. 2018. *How to Change Your Mind: What the New Science of Psychedelics Teaches Us about Consciousness, Dying, Addiction, Depression, and Transcendence*. New York: Penguin Press; McRaney, David. 2022. *How Minds Change: The Surprising Science of Belief, Opinion, and Persuasion*. New York, NY: Portfolio/Penguin, an imprint of Penguin Random House LLC.

⁵ Andrade, Roy G. d'. 1992. "Schemas and Motivation." In *Human Motives and Cultural Models*, edited by Roy G. D'Andrade and Claudia Strauss, 23–44. Cambridge UK: Cambridge University Press; DiMaggio, Paul. 1997. "Culture and Cognition." *Annual Review of Sociology* 23 (1): 263–87.

⁶ Kahneman, Daniel, Paul Slovic, and Amos Tversky. 1982. *Judgment Under Uncertainty: Heuristics and Biases*. Cambridge University Press.

can say that they *learned* that there is no necessary correlation between cooler temperatures and precipitation.

What makes schema so interesting is that they operate at both individual and collective levels. People hold schema of all kinds (ice cream flavors, types of tree, political values) and people often assume that their schema align with others' because schema are rarely make explicit. Yet, our ability to talk about ice cream or politics rests on the likelihood that our schema basically align. Shared schema suggest shared cultural frameworks and one of the ways in which an individual signals their membership in a social or cultural group is by demonstrating that they possess a schema that is shared or understood by others in that group.

But how do people go about updating their mental models? How do they adopt shared schema, or distinguish between their personal schema and those that they share with others? Is there a singular Jewish schema or is Jewish life the product of many overlapping and sometimes competing schema that people regularly apply and update?

The answers to these questions hold crucial insights that will fundamentally change Jewish education. We do not yet have the answers, but it is not too early to begin considering the implications of centering learning on the practices and institutions of Jewish education. To initiate this effort, we offer six implications that the pivot to learning might hold for the field. Each one is followed by a set of questions intended to structure conversations for stakeholders explore more deeply how people learn in Jewish education.

Implications and Questions

Implication #1: Learning happens at the level of schema

Psychologist Jean Piaget, who helped lay the groundwork for the Learning Sciences, offered two theories to explain the process.⁷ The first, he called *assimilation*. Learners assimilate new experiences by fitting them into their existing schemata. To return to the example above, the person had a conception of rain which enabled them to make sense of water falling from the sky in July. The person's schema for "substances that fall from the sky" allowed them to understand the summer storm as "rain," even if they

⁷ Piaget, J. The construction of reality in the child. New York: Basic Books, 1954.

were confused by its temperature or timing. But they knew what rain was, which fit their existing schema of “substances that fall from the sky” (not snow, not hail). Assimilation is a relatively gentle version of learning because it leaves schema largely intact, drawing information into it but not requiring a substantial revision of the schema in question.

Piaget called his second theory *accommodation*. Accommodation refers to the process by which learners adapt their schema to fit new experiences. In the example above, a summer rain might force a person to revise their whole understanding of weather and how they organized it in their mind. Accommodation happens when the evidence of the outside world effectively overpowers an individual’s schema, forcing a significant revision to the mental model in order to account for new information. Accommodation works at scale, too; when Thomas Kuhn wrote about “paradigm shifts,” he was, in a sense, describing how a community changes its schema.⁸

For Piaget, assimilation and accommodation work in tandem. Assimilation ensures a measure of stability to a person’s mental models, while accommodation guarantees that those models can change. Too much emphasis on assimilation precludes the development of novel ideas and can introduce biases of all kinds; Too much accommodation leaves people without any stable mental models to draw on and can be profoundly disorienting. Piaget argued that the relationship between them (he used the term “equilibrium”) was central to understanding how people learn and thus, how teachers ought to teach.

Questions:

- If schema are internalized cultural norms, then what are the schema of North American Jews?
- What mental models do they hold for the world and how might Jewish educators set about creating conditions to change them?
- How might the knowledge that Jews hold many schema simultaneously (as is true of most people), shape the work of Jewish educators?

⁸ Kuhn, Thomas S. 1996. *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.

Implication #2: Learning requires the production of knowledge.

If Piaget's theory is generally correct, then accommodation and assimilation require some active effort on the part of people as they respond to new information. People do not receive knowledge passively but they actively and effortfully make new experiences or new information meaningful by assimilating it into what they already know or by accommodating what they already know to the new experience. Piaget argued that learning is not a process of receiving and storing information, but of actively constructing and reconstructing one's mental models of the world. By referring to this theory of learning "constructivism," Piaget invites us to think of learning as the practice of knowledge production.

Perhaps the best example of the application of this approach can be found in science education. A generation ago, San Francisco's Exploratorium, put some of Piaget's ideas into action and transformed science museums from "collections of ideas" into "interactive science centers."⁹ Applying the constructivist approach to science museums meant replacing artful displays and carefully staged demonstrations with hands-on experiments and opportunities for visitors to explore scientific ideas on their own. Curators and educators gambled that visitors might gain deeper insights into scientific phenomena if they could construct knowledge through experimentation rather than exposition. It worked.

Questions:

- What does Piaget's concept of homeostasis look like in Jewish educational settings?
- What is the role of teachers in facilitating learners as they produce knowledge?
- What cultural resources are learners bringing to their Jewish educational experiences?

Implication #3: Learning is collaborative.

If mental models are the basic mechanism for learning, and mental models are cultural, then they never belong to or result from the efforts of a single individual. They are shared. This means that assimilation and accommodation are social and cultural processes. Everyone learns, but nobody learns in isolation. People learn when they

⁹ Ogawa, Rodney T., Molly Loomis, and Rhiannon Crain. 2009. "Institutional History of an Interactive Science Center: The Founding and Development of the Exploratorium." *Science Education* 93 (2): 269–92.

think and act together, however uncoordinated a given action might seem. Playing pickup basketball, dancing at a club, negotiating the aisles in a grocery store, even waiting in line requires some kind of collaboration as people collectively figure out how to engage in activities together.¹⁰ Schema can be thought of as internalized cultural norms which are also shared with others. Though our thoughts might be our own, even they are constructed from words that are not ours alone.¹¹

Psychologist Barbara Rogoff and her colleagues found that even relatively simple cultural tasks require a network of people to accomplish them. Each participant holds a piece of the necessary knowledge which means that learning is both a social and a cultural process.¹² In a study of the sale of Girl Scout Cookies, Rogoff found that sellers and buyers were just some of the people who contributed to the effort: siblings helped make change, parents figured out the best routes for dropping off orders, and other adults knew where the girls could set up sales tables.¹³ Of course, cookie sales also relied on the factories where the cookies were made, the truck drivers who delivered the cookies to the scouts, and the multimillion-dollar organization of the Girl Scouts to coordinate the overall effort. Through a careful study of the knowledge required to sell cookies, Rogoff demonstrated how Girl Scouts participated in an active sociocultural system in which knowing how to sell or buy a box of cookies was only part of what was culturally necessary to accomplish the task.

Questions:

- What settings already exist that enable people to learn together and how can they be better utilized?

¹⁰ DeLand, Michael F. 2012. "Suspending Narrative Engagements: The Case of Pick-up Basketball." *The Annals of the American Academy of Political and Social Science* 642 (1): 96–108; Gibson, David R. 2008. "Doing Time in Space: Line-Joining Rules and Resultant Morphologies." *Sociological Forum* 23 (2): 207–33; Ma, Jasmine Y., and Charles Munter. 2014. "The Spatial Production of Learning Opportunities in Skateboard Parks." *Mind, Culture, and Activity* 21 (3): 238–58; Wang, Jianyu, Wenhao Liu, and Jeffrey Moffit. 2010. "What Skills and Tactics Are Needed to Play Adult Pick-Up Basketball Games?." *ICHPER-SD Journal of Research* 5 (2): 41–47.

¹¹ The bit about words is from Bakhtin, M. M. 1981. *The Dialogic Imagination : Four Essays*. Austin : University of Texas Press,.

¹² Gutierrez, Kris D., and Barbara Rogoff. 2003. "Cultural Ways of Learning: Individual Traits or Repertoires of Practice." *Educational Researcher* 32 (5): 19–25; Rogoff, Barbara, and Jean Lave, eds. 1984. *Everyday Cognition: Development in Social Context*. Cambridge: Harvard University Press.

¹³ Rogoff, Barbara, Karen Topping, Jaquelyn Baker-Sennett, and Pilar Lacasa. 2002. "Mutual Contribution of Individuals, Partners, and Institutions: Planning to Remember in Girl Scout Cookie Sales." *Social Development* 11 (2): 266–89.

- How might the collective and collaborative nature of learning alter the approach to education that emphasizes individual identity?
- If learning is collective, how might that change classrooms? Programs? Curricula? Ritual?
- What opportunities for collaboration exist beyond the Jewish community?

Implication #4: People learn with tools

People collaborate with one another to accomplish learning but they also collaborate with non-human tools, too. Skis teach people to move their bodies in one set of ways, while skateboards encourage a different kind of embodied learning. Anthropologist Edwin Hutchins argued for the role of non-human actors in the collaborations necessary for learning, titling his study of an airplane crew “how a cockpit remembers its speeds.”¹⁴ Philosophers David Chalmers and Andrew Clark posed a similar question in a more philosophical way in 1998, asking, “Where does the mind stop and the rest of the world begin?”¹⁵ When I consult a grocery list, is it proper to conclude that I am the thinking agent or do technologies like grocery lists mean that my mind actually thinks with the paper and pencil (to say nothing of the store)?

As learning goes, these may be fairly simple examples. but the deeper point is that people do not only *rely on* tools of all kinds – shopping lists, pencils, the instruments in an airplane cockpit – but they *think and learn with* those tools, as well. These tools become part of the larger apparatus that makes thinking and learning possible. So the ways in which people learn is shaped by their tools.

In formal educational settings, we can think of many tools designed to help people learn: the slate, the chalkboard, the moveable desk, the lecture hall, the outdoor classroom. Pencils and paper, calculators, computers, books.¹⁶ Less formal educational settings also rely on tools to facilitate learning: buses, bunks, closing circles. Some educational tools are quite concrete (note cards, classrooms) while others are more conceptual (curriculum, a program, heritage tourism). But they are tools all the same.

Questions:

- What kinds of tools, both conceptual and material, do people use to learn about Jewish life that Jewish educators might have dismissed or overlooked?

¹⁴ Hutchins, Edwin. 1995. “How a Cockpit Remembers Its Speeds.” *Cognitive Science* 19: 265–88.

¹⁵ Clark, Andy, and David Chalmers. 1998. “The Extended Mind.” *Analysis* 58 (1): 7–19.

¹⁶ Wertsch and seely brown.

- What new ways of learning open up if we account for the interactions between people and tools?
- What happens to our relationship to tools if we account for all the ways they allow us to think and learn?

Implication #5: Learning relies on feeling

Although schema are largely thought of as cognitive structures, they do not exist only in peoples' minds. People learn and reason with their senses and their bodies, as well: Taste, smell, emotions, a sense of one's body in space all provide vital information that have been shown to be fundamental to learning. Even accommodation and assimilation are not purely the result of cognitive activity.¹⁷ Because they are rarely made explicit, schema can be felt as much as they can be known.

How people feel shapes what they know and how they understand the world. It even shapes their moral and ethical reasoning, as psychologist Jonathan Haidt has found across numerous studies. Haidt argues that rather than holding fully-developed, rationally derived ethical or moral codes that drive behavior, people react emotionally to stimuli and then back-fill explanations to make their reactions reasonable to themselves and others.¹⁸ Explanations are not motivations, he argues, rather, they function as post-hoc justifications (to ourselves and others) for more basic, emotional responses. The upshot is that people can tell you why they believe what they do, but, he explains, they are always making it up to explain how they feel.

Often, people's emotional states are chalked up to sources of distraction but the work of neuroscientists like Mary Helen Immordino-Yang and Antonio Damasio have made a compelling case that feelings are central to the learning process.¹⁹ This can be as plain as feeling excited by material one is learning or feeling proud of an accomplishment. Feelings like these do not exist outside of the process of learning either as accelerants

¹⁷ Immordino-Yang, Mary Helen, and Matthias Faeth. 2010. "The Role of Emotion and Skilled Intuition in Learning." In *Mind, Brain, & Education: Neuroscience Implications for the Classroom*, edited by David A. Sousa. Bloomington, IN: Solution Tree Press. See also Swanson, Troy A. 2023. *Knowledge as a Feeling: How Neuroscience and Psychology Impact Human Information Behavior*. Erscheinungsort nicht ermittelbar: Rowman & Littlefield Publishers.

¹⁸ Haidt, Jonathan. 2013. *The Righteous Mind: Why Good People Are Divided by Politics and Religion*. New York: Vintage.

¹⁹ Immordino-Yang, Mary Helen, and Antonio Damasio. 2007. "We Feel, Therefore We Learn: The Relevance of Affective and Social Neuroscience to Education." *Mind, Brain, and Education* 1 (1): 3–10. <https://doi.org/10.1111/j.1751-228X.2007.00004.x>.

or distractions, but rather as part of the apparatus – cognitive, material, schematic, emotional – that people use to learn.

Questions:

- How can Jewish educators work to diminish the supposed tension between “thinking” and “feeling?”
- What does the relationship between emotion and cognition tell us about how people form or change commitments to Jewish ideas or practice?
- What ethical concerns arise when considering the place of emotion in learning?

Implication #6: All Learning is Experiential

If assimilation and accommodation are the processes that people use to make sense of new experiences then all education can be thought of as “experiential education.” Just because the experiential dimensions of classrooms or text study do not employ the high levels of intensity that settings do (overnight camp, travel), does not mean that they are less of an experience, per se. At the same time, many of those committed to experiential education still do not have a theory of learning that guides their efforts. Understanding experience – and new experiences in particular – as the engine of learning can open up new avenues for thinking about how to understand learning as it happens.

True, complaints about Jewish education from the *heder* to the Sunday School are nearly as old as the undertaking itself. Apocryphal stories about parents telling their children, “I hated Hebrew School but I had to go, so you will, too,” abound in communities around North America (and probably elsewhere, too). The feeling of general terribleness (or boredom, discomfort, shame) has shaped how people learn, sometimes impeding people’s ability to do so. That, too, was a kind of learning by experience, albeit not necessarily the kind intended by the teachers.

Questions:

- How might attending to the experiential dimensions of even low-intensity experiences shape the learning that takes place?
- How might Jewish educators account for a range of experiences as a person learns across the lifespan?

- What is the place of less intensive experience within a fuller experience of learning?

Conclusion: Learning in Jewish Education

Jewish education has evolved around a primary concern for delivering knowledge, with the hope that teaching will lead to learning. This approach is grounded in a false promise that people will learn if teachers teach. But people learn in ways that teaching cannot account for. Taking Jewish education as a specific site for learning, this report offers implications and questions in order to instigate a much longer and larger conversation about the field, its purpose, its effectiveness, and the practices and presumptions that have long guided it.

Shifting the focus of Jewish education from what people ought to know and toward an understanding of how people learn can help educators develop more reflective and responsive approaches. Schema, assimilation and acculturation, sociocultural collaboration, tool use, emotion, and experience offer some critical concepts for understanding how people learn in Jewish education.