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► **To cite this version:**

Anne D Williams. Therapeutic Play. Adult Puzzling and Hard Times. American Journal of Play , 2024, 16 (2-3), pp.197-209. hal-04792217

HAL Id: hal-04792217

<https://sorbonne-paris-nord.hal.science/hal-04792217v1>

Submitted on 20 Nov 2024

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Therapeutic Play

Adult Puzzling and Hard Times

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ANNE D. WILLIAMS

The author examines the therapeutic value of puzzles for adults during two major crises in the United States, the Great Depression of the 1930s and the COVID-19 pandemic of the early 2020s. Each period saw a huge surge in jigsaw puzzling throughout the country, she finds, and in both cases people turned to home-based leisure activities, either for financial reasons or because of lockdowns. Contemporary accounts from the two periods form the basis for the discussion. In both cases, the surge in puzzling reflected both the demand by consumers and the relatively easy entry of new small-scale producers into this area of playthings. Advertising played a major role, too, via premiums given to purchasers of consumer products in the 1930s, and more recently through social media and the Internet. **Key words:** adult play; COVID-19; Great Depression; jigsaw puzzle; pandemic; puzzle industry

JIGSAW PUZZLES ARE A traditional pastime for young children. Puzzles amuse, educate, and play an important role in developing a child's observational skills (color, shape, and pattern recognition), hand-eye coordination, fine motor movements, problem-solving abilities, and resilience.

Many adults also do jigsaw puzzles, large ones rather than the simple twenty-piece puzzles for preschoolers. Puzzles with subjects that appeal to adults provide entertainment, of course. Such jigsaw puzzles are perennial favorites for solitary or family entertainment, especially during vacations. Puzzles also provide important social and emotional benefits.

I examined two examples of heightened jigsaw puzzle usage by adults in the United States in the last century. The first occurred in the early 1930s during the Great Depression. The second was from 2020 to 2021 during the COVID-19 pandemic. The first three sections of this article describe these two major crazes, along with their common features and differences. The last section analyzes the benefits that adults obtain from doing jigsaw puzzles. Sources include published

accounts from the 1930s and early 2020s as well as the author's survey of sixteen current American puzzle manufacturers and retailers about their experiences during the pandemic.

The Great Depression Jigsaw Puzzle Craze

The Great Depression began in the United States with the stock market crash of October 1929 and lasted a decade. Initially, it affected Wall Street only, not main street America. But as the economy worsened steadily over the first three years, it impacted everyone. The country hit bottom in early 1933, when the national unemployment rate reached 25 percent. Layoffs were even higher in big industrial cities such as Detroit. Workers who kept their jobs were not immune. Many suffered lower incomes because shortened hours replaced full-time work. Those who still had full-time employment lived in fear that the crisis would spread to them (Williams 1993).

As the economy declined, interest in jigsaw puzzles rose. In response, the major puzzle companies increased production and issued catalogs more frequently. Parker Brothers, for example, doubled its employment of puzzle cutters between 1928 and 1931. (Williams 2004). At first, people did traditional wooden



Figure 1. Lambert Pharmacal advertised its toothbrush and its puzzle giveaway in multiple issues of the *Saturday Evening Post* and other popular magazines in July 1932. Courtesy Anne D. Williams.

puzzles, cut by hand using a jigsaw, also known as a scroll saw. These puzzles were relatively expensive; a three-hundred-piece wooden puzzle cost between \$1.50 and \$4.50, a steep price, given the prevailing wage of twenty-five cents per hour. To save money, many puzzlers used that era's equivalent of Netflix, local libraries that rented puzzles for five cents per day or twenty-five cents per week. Puzzle exchanges and puzzle clubs also allowed people to find new puzzle at a low cost.

By mid-1932, makers of consumer goods still saw sales plummeting, despite many price reductions. In July the Lambert Pharmacal Company of St. Louis decided to try stimulating sales by offering a free cardboard jigsaw puzzle to each buyer of its Pro-Phy-Lac-Tic toothbrushes. The firm simultaneously raised the toothbrush price by 16 percent, from twenty-five cents to twenty-nine cents. Amazingly, its sales quadrupled. Since the puzzles cost only about one cent to produce, profits soared.

Lambert Pharmacal's impressive results with its puzzle giveaway led other companies to follow suit. Soon consumers could get free puzzles with purchases of almost every type of product. Motor oil, automobiles, cereal, dairy products, soap, shoes, lumber, furnaces, and insurance made for just a few. Even hospitals and funeral homes offered puzzle premiums to their clientele. Whereas the Pro-Phy-Lac-Tic Brush puzzle had only fifty pieces, later puzzles were bigger, with up to two hundred intricate interlocking pieces. Some also contained special pieces to reflect the product. For example, the Hills Brothers Coffee puzzle contained several pieces shaped like miniature coffee pots.

A few months later, in autumn 1932, commercial cardboard puzzles for adults appeared on the market. Many firms issued a new puzzle every week. This genre flourished with brands such as Picture Puzzle Weekly, Jig of the Week, B Witching Weekly, Once-A-Week Dime Puzzle, Cartoon Jig Weekly, and Gamo-Jig Weekly. Consumers rushed to news-stands and other retailers to buy a puzzle for a price of ten to twenty-five cents.

A February 1933 article reported an estimate that the industry was producing ten million puzzles each week, of which about 30 percent were sold and 70 percent given away for free (*Advertising Age* 1933). Given that there were only thirty million households in the United States at the time, jigsaw puzzles were entertaining a large fraction of the population.

Jigsaw puzzle themes saturated popular culture through the winter of 1932–1933. Newspapers and magazines featured cartoons, poems, and fiction about jigsaw puzzles. Popular songs included titles such as “My Jig Saw Puzzle of Love” and “I’m the Jig Saw Man.” The film *Me and My Pal* revealed the chaos that ensued

after Stan Laurel presented Oliver Hardy with a jigsaw puzzle as a wedding gift.

The craze ended abruptly in March 1933 due to the confluence of several factors. The Internal Revenue Service had just ruled that jigsaw puzzles were subject to a 10 percent excise tax. Franklin D. Roosevelt's inauguration as president on March 4 brought a bank holiday that halted most commerce. Then his New Deal generated optimism that the economy was recovering. Warmer weather and the end of the prohibition on alcoholic beverages meant people spent less time at home and more time in other activities.

The COVID-19 Pandemic Puzzle Craze

In contrast with the gradual onset of the Great Depression, the COVID-19 pandemic hit suddenly. The United States went from 31 deaths in January and February 2020 to more than 111,000 Americans dead by the end of May (U.S. Centers for Disease Control and Prevention 2020). Lockdowns started in San Francisco in mid-March and spread widely. "Zoom" became a household word as work and schooling shifted to remote mode.

Economic activity declined precipitously. Many retail stores closed, as did restaurants. The travel and leisure sector perhaps suffered the most among businesses. Not only were consumers fearful of being around others, but with so many people sick, maintaining a full staff became impossible for most enterprises. The unemployment rate more than quadrupled in two months, reaching 14.7 percent in April (U.S. Bureau of Labor Statistics 2020). Gross Domestic Product fell by 5.3 percent in the first quarter of 2020 and 28 percent in the second quarter (U.S. Bureau of Economic Analysis 2024).

Jigsaw puzzle sales soared just a few days after the World Health Organization declared a pandemic on March 11, 2020. On March 24, "puzzles for adults" reached the top ten list of Amazon searches, keeping company with hand sanitizer, disinfectants, Clorox wipes, and similar products (J. Miller 2020). The experience of Artifact Puzzles was typical for the industry. Sales of their laser-cut wooden jigsaw puzzles spiked in mid-March. Owner Maya Gupta reported that Artifact Puzzles sold out its stock sixteen days after the San Francisco Bay-area lockdown went into effect. "After that we kept making new puzzles, putting them into stock, and selling out right away" (Gupta 2023).

Manufacturers and sellers of cardboard puzzles had similar experiences. Ceaco sold more puzzles on a single March day than in its entire holiday peak

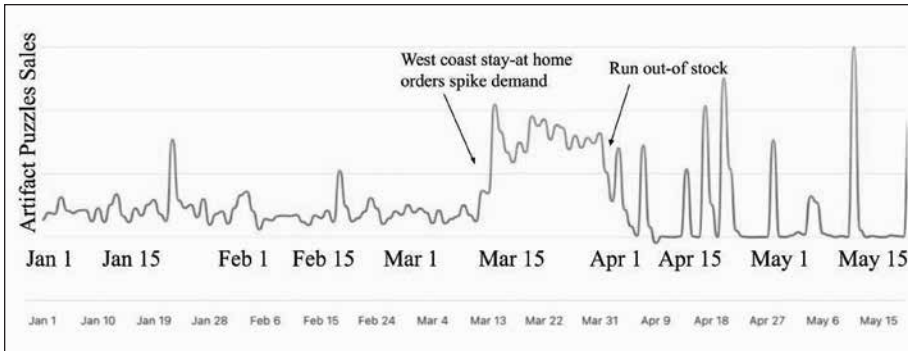


Figure 2. The shelter-in-place order in the San Francisco area took effect on March 17, 2023. Jigsaw puzzle sales immediately began to soar. Courtesy Maya Gupta, Artifact Puzzles.

during the previous December. Ravensburger's sales in late March were 370 percent higher than they had been in the same period in 2019 (Doubek and Silverman 2020). Puzzle Warehouse, a large online retailer, saw a ten-fold increase in sales at the same time (Blair 2020).

The puzzle craze remained strong through 2020 and much of 2021. News reports and social media were full of stories about jigsaw puzzles—their availability, their benefits, their popularity, the newest images, and so on. My survey of sixteen United States puzzle companies showed that the extraordinary pandemic demand lasted only two years. By 2022 vaccines, medical treatments, and the reduced mortality rates of newer COVID-19 variants had allowed for a gradual return to prepandemic levels of activity.

Comparing the Two Puzzle crazes

The circumstances in the 1930s and the 2020s had both similarities and differences with respect to jigsaw puzzle usage and availability. The demand for puzzles was high in both periods. People stayed home and did jigsaw puzzles. The underlying reasons, however, differed. In the 1930s financial worries kept people from eating out, casual shopping, and commercial leisure activities. During the pandemic, fears about health kept them at home; they did not even socialize in person with friends or relatives. Those who had lost jobs had to cut back on their spending. In both periods, puzzles provided home entertainment that was safe and affordable.

Of course, people today have many more home entertainment options than those of the 1930s. During the Great Depression, there was no television, no streaming movies, no video games, no Internet, no social media, no YouTube. Although these newer technologies were available during the pandemic, they did not suffice. People spent full days using their devices, for work or schooling or keeping up with the news. For leisure, perhaps they wanted something different.

The two eras experienced a big difference in the supply of puzzles. In the 1930s, the output of the traditional wooden puzzle makers grew steadily. High unemployment made it easy to hire additional workers. Other industries got into puzzle making too. For example, S. S. Adams, a longtime maker of novelties, bought some saws and started cranking out puzzles. The Shut-In Society of Philadelphia, a sheltered workshop, extended its woodworking operations to include jigsaw puzzles.

There were also untold numbers of small-scale makers of wooden jigsaw puzzles. The state of Maine alone had more than one hundred (*Lewiston [Maine] Evening Journal* 1933). Job loss had been high in the housing industry and anything connected to it. Architects, carpenters, furniture makers, machinists and the like were out of work and also comfortable using power tools. It was easy to buy a scroll saw for twenty dollars, cut wooden puzzles at home, and market them locally. Home workshop magazines such as *Popular Home Craft*, *Home Craftsman*, *Popular Science*, and *Popular Mechanics* published articles and booklets that clearly explained the simple techniques for manufacturing and marketing puzzles (Perry and Webster 1933).

Phyllis McLellan of Gardiner, Maine, was typical of these small-scale entrepreneurs. She bought a Delta Specialty Company scroll saw in January 1931, made jigsaw puzzles at her kitchen table, and sold them to twenty major Maine gift shops. In her first five months of business her profits averaged \$35.36 per week, more than three times the earnings of a typical full-time worker (Delta Specialty Company 1931).

The cardboard advertising and commercial puzzles that flooded the market in 1932 and 1933 required heavier equipment not suited for home production. Here again there were idle resources to fill the bill. The cardboard box and display advertising industry already used steel rule dies in huge presses that exerted thousands of pounds of pressure to cut large sheets of cardboard. Adapting the machinery to produce jigsaw puzzles simply involved ordering new dies that cut a puzzle into several hundred pieces in one pass.

Another interesting entrant into puzzle production was the Upson Com-

pany, a maker of wallboard in Lockport, New York. In the face of a moribund housing industry, the company began converting its wallboard into jigsaw puzzles. Its Tuco puzzle brand continued from 1932 through the early 1980s (Williams 2004). Several gasket companies also used their equipment to press puzzles out of cork.

The availability of jigsaw puzzles was much less consistent in 2020 and 2021. The surge in sales in March and April 2020 soon depleted inventories completely. Several months followed in which puzzles were in short supply. Most U.S. puzzle factories had to shut down for two or more months because state governments deemed puzzles to be nonessential. Once they reopened, distancing mandates, sanitation measures, and employee illness meant they struggled to maintain prepandemic production levels. As late as November 2020, Liberty Puzzles in Boulder, Colorado, faced a backlog of twenty-five thousand orders. As a stopgap, Liberty rationed customers to a single puzzle each. Yet it took the company many more months to eliminate the queue (Williams 2020).

Many smaller American puzzle companies did not have factories but subcontracted out their manufacturing, usually overseas. But these offshore subcontractors were also swamped with orders. For many months they could not increase production fast enough to meet the demand. Shipping delays added to the supply chain problems.

A vibrant secondary market developed and thrived for much of 2020. Individuals who managed to acquire new puzzles were assembling them quickly then reselling them on venues such as eBay at substantial profits, sometimes as high as eight times their original cost (Williams 2020). Thrift shops such as Goodwill also raised their prices for used jigsaw puzzles.

Local libraries that loaned out puzzles mostly closed during 2020. Informal puzzle clubs and exchanges started up or expanded to fill the gap. Artifact Puzzles opened its rental library, the Hoefnagel Puzzle Club, in August 2020. Owner Maya Gupta explained: “We figured renting would be a better use of what we could manufacture, as we could make one puzzle and rent it to ten puzzle-starved people” (Gupta 2023).

Despite the production challenges, new firms saw opportunities in the high demand and continued to enter the puzzle business. It cost relatively little to buy a scroll saw or laser cutter for crafting wooden puzzles on a small scale. Later in 2020, new makers of cardboard puzzles sprang up. Usually, they offered a limited supply of puzzle images and subcontracted out the manufacturing. Several women-owned firms promoted images by women artists and established

themselves in a market niche previously dominated by the eeBoo company.

The pandemic stimulated the growth of the newest marketing channels. Introducing product to retailers in person was not an option because industries had cancelled their annual trade shows. Instead the newcomers bypassed traditional distributors and stores and went directly to the Internet to set up a website, a Facebook page, or an account with an online retailer such as eBay, Etsy, or Amazon. Internet selling was much easier and less expensive than trying to build a clientele with traditional methods. Established companies too upgraded their websites so they could begin selling directly to consumers.

There are no statistics on who exactly accounts for the increased adult puzzling in hard times. Undoubtedly, it is a mix of experienced puzzlers who are spending more time on this activity plus people who are taking up puzzling for the first time since their preschool years. In 2020 only a few companies kept track of some changes. Nautilus Puzzles owner Mary O'Brien commented: "Customers skewed younger in 2020 than in 2019. It seemed many younger folks discovered jigsaw puzzles or rediscovered them for the first time. Now it has mostly shifted back to the regular 50+ demographic" (O'Brien 2023). And according to eeBoo, "The pandemic brought more young women to puzzling" (Galison 2023).

Why Jigsaw Puzzles during Hard Times?

Many advice columns in the last decades have urged adults to do puzzles intentionally as a way to maintain and improve their cognitive skills, short-term memory, intelligence, and attentiveness (Nazish 2023). While these claims about the advantages of puzzles still have quite limited scientific evidence to support them, they probably convince some people to take up puzzling on a regular basis. But the motivation for the surge in jigsaw puzzling in the Great Depression and in the pandemic was not a response to such self-improvement advice. It was more basic. Jigsaw puzzles played an important role in maintaining psychological and emotional well-being during both periods.

There are several ways in which puzzling reduces stress and improves mental health. First, jigsaw puzzles help people regain a sense of control. Both the Great Depression and the pandemic were times of extreme uncertainty, fear, and chaos. It was impossible to know what was coming next. Almost no one could understand nor tackle either the economy of the 1930s or the complexities of COVID-19. While a jigsaw puzzle loose in its box is an extreme example

of chaos, it represents chaos that can be mastered with time and effort. People could spread one thousand pieces on a table and sort through them to assemble a complete picture. Even this limited achievement gave them the sense of being in control, of bringing order out of chaos. Ohio State University clinical psychologist Michael Vilensky spoke about this: “With a puzzle, with enough time and effort, we can control the outcome, know it will end, and experience a sense of relief and accomplishment when it’s finished” (Bologna 2020). And even if some puzzlers never got around to completing the picture, they could exert control simply by putting the pieces back in the box.

Second, puzzles give people something interesting to ponder. For most people, jigsaw puzzles are very compelling. Puzzlers become totally absorbed in the process of finding the next piece and building the picture. Many a puzzler has started to leave the puzzle table, then spotted a match, and sat back down, saying, “Just one more piece.” This kind of absorption calms the mind. It relieves stress and soothes by shutting out the worries of the real world. Betsy Stuart, founder of Elms Puzzles, summarized this phenomenon, saying that assembling puzzles is “a relaxing process and a way to forget about things that are driving you crazy. It takes your mind off your pain and problems” (Feld 2007).

Third, jigsaw puzzles are very adaptable to one’s mood. They can be a solitary entertainment at times when one needs to be alone. But they can also be a social activity in which the puzzler interacts with others. Chris Wirth, founder of Liberty Puzzles, describes puzzling as “something you can do in the background. And you can have a whole other social experience while you’re doing it” (Hannon 2021).

Puzzling was especially important during the lockdowns when entire families were stuck at home. Jigsaws could be an entertainment for parents and children together. Or children could do puzzles while parents worked remotely from home. Thinking along these lines, on March 29, 2020, Australian Prime Minister Scott Morrison declared: “Over the next few months we will consider those jigsaw puzzles absolutely essential. It is important that parents and families and households can get the things that they need to completely change the way they are going to live for the next six months at least” (J. Miller 2020).

Fourth, puzzling with others is a flexible activity. It can be either cooperative or competitive. Competitive puzzling was popular in both the 1930s and the 2020s. In the Great Depression, Einson-Freeman—the largest manufacturer of puzzles—put an “average time schedule” on the packaging so puzzlers could compare their assembly times to that of others. The labels also urged consumers

to buy multiple copies of the same puzzle for holding a “jig-saw race.” Dozens of other firms sold contest sets, boxes holding up to a dozen puzzles of the same size, along with rules for organizing a contest. Organizations and department stores hosted competitions with inexpensive cardboard puzzles. Each contestant paid an entry fee and did the same puzzle. The one who completed the puzzle fastest won the prize. The runners-up got to keep the puzzles they assembled.

During the pandemic, speed puzzling became even more popular, although competition logistics had to be more complicated because of health concerns. The organizer would ship a sealed puzzle to each entrant ahead of time. At the designated hour, the contestants joined a Zoom call. Under the eyes of monitors they then broke the seals and did the puzzles while on screen.

Cooperation and competition also took place in other interactions among puzzlers, especially during the pandemic when puzzlers connected with each other via technologies that did not exist in the 1930s. Facebook groups devoted to jigsaw puzzles grew in size, and new groups started up. Instagrams featured puzzles. Some of the online posts were competitive. A puzzler would boast of acquiring a hard-to-find puzzle or of finishing an especially difficult one. More cooperative posts came from influencers and bloggers. They alerted followers to the launches of new brands, rated their quality, and shared tips on puzzle assembly, display, and storage.

Fifth, compared with reading, screen entertainment, or many other leisure activities jigsaw puzzles offered a tactile quality. There is something special about sorting pieces, picking one up, feeling its weight, rotating it to analyze its shape, and fitting it into place. The process is very different from manipulating a mouse, touch screen, or keyboard. Using one’s hands as well as one’s brain adds another calming dimension to jigsaw puzzling. Marcel Danesi, author of *The Puzzle Instinct* said, “In an age of disembodiment, this reintegration of body and mind is becoming very common. . . . I have found that young people today have become so accustomed to doing everything on the screen that when they discover the ‘pleasure’ of the body in something as seemingly trivial as jigsaws, they plunge into it” (McNeely 2020).

Sixth, puzzles also have a visual appeal. The jigsaw puzzles of the Great Depression often showed foreign destinations that were unaffordable for most people at the time. Thatched English cottages, Venetian canals, and Dutch flower markets were frequent subjects. During the pandemic, when travel was very limited, exotic locales were again a popular theme. There were also many colorful, nostalgic, and comforting images. More than a few puzzles

even featured favorite foods. Scenes of misery, illness, war, and crime were rare, although there were a few mystery- or horror-themed puzzles. In both periods, vendors offered personalized puzzles made from photos sent in by individual customers.

To some extent, of course, the increase in puzzling during both eras of hard times was simply a function of available time. In the 1930s, many businesses retained employees but cut back their hours drastically. Part-time workers obviously had more time for leisure activities. Similarly, during the pandemic remote workers were not commuting to their workplaces, often freeing up an hour or more per day for other activities.

Conclusion

In difficult times, American adults do more jigsaw puzzles. The reasons for turning to this inexpensive, home-based entertainment are multifaceted, with psychological reasons being very important.

My research is limited to the United States and to jigsaw puzzles. Additional study is needed to examine how puzzlers and the puzzle industry in other countries react to hard times. It would also be useful to determine the extent to which other types of puzzles—crosswords, sudoku, Rubik cubes, etc.—provide similar or different benefits in times of crisis.

Many individuals and companies over several decades have contributed to my research on the history and usage of jigsaw puzzles. I am especially grateful to the puzzle manufacturers and retailers who responded to my survey in 2023: Janell Amely (3 Cat Max), Conrad Armstrong (Armstrong Puzzles), Aaron Boxerman (RAR Puzzles), Mia Galison (eeBoo), Maya Gupta (Artifact Puzzles), Jesse Louis-Rosenberg (Nervous Systems), Justin Madden (Par Puzzles), Mary O'Brien (Nautilus Puzzles), Terra Rodgers (Chestnut and Hemlock), Thom Spencer (Puzzle Art), Michael Sturba (Micro Puzzles), Paula Tardie (Stave Puzzles), Lisa von Hasslen (Waterford Puzzle Company), Chris Wirth (Liberty Puzzles), Colin Wroblewski (White Mountain Puzzles), and Chris Yates (Chris Yates Studio).

REFERENCES

Advertising Age. 1933. "Jig-Saw Puzzle Use Increasing." February 25, 6.

- Blair, Elizabeth. 2020. "Puzzle Business Goes 'Bonkers' as People Seek Pandemic Puzzles at Home." November 9. <https://www.npr.org/2020/11/09/932652740/puzzle-business-goes-bonkers-as-people-seek-pandemic-pastimes-at-home>.
- Bologna, Caroline. 2020. "Why Jigsaw Puzzles Are So Soothing and Addicting Right Now." May 27. https://www.huffpost.com/archive/au/entry/jigsaw-puzzles-soothing-coronavirus_a_u_5ed5b4a9c5b6e038f8265bec.
- Danesi, Marcel. 2004. *The Puzzle Instinct: The Meaning of Puzzles in Human Life*.
- Delta Specialty Co. 1931. *What Others Have Done with "Delta" Tools in Hobby, Spare Time, and Production Work*.
- Doubek, James and Art Silverman. 2020. "With People Stuck at Home, Jigsaw Puzzle Sales Soar," *All Things Considered*, April 13. <https://www.npr.org/sections/coronavirus-live-updates/2020/04/13/833346707/with-people-stuck-at-home-jigsaw-puzzle-sales-soar>.
- Feld, Karen. 2007. "Jigsaws Silenced: Remembering the 'First' Puzzlemaker." September 1. <https://www.karenfeld.com/jigsaws-silenced-remembering-afirsta-puzzlemaker>.
- Galison, Mia. 2023. Personal communication to author. June 8.
- Gupta, Maya. 2023. Personal communications to author. June 8, 9, and October 24.
- Hannon, Aedan. 2021. "Chris Wirth Isn't Your Average Puzzle Maker." 5280. February 25. <https://www.5280.com/chris-wirth-isnt-your-average-puzzle-maker/>.
- Lewiston (Maine) *Evening Journal*. 1933. "Tax Blight Hits Local Jig-Saw Makers." March 4, 5.
- McNeely, Sean. 2020. "What's behind Puzzles' Popularity during the Pandemic?" May 21. <https://www.artsci.utoronto.ca/news/whats-behind-puzzles-popularity-during-pandemic>.
- Miller, Hannah. 2020. "Demand for Jigsaw Puzzles is Surging as Coronavirus Keeps Millions of Americans Indoors." CNBC. April 3. <https://www.cnbc.com/2020/04/03/coronavirus-sends-demand-for-jigsaw-puzzles-surging.html>.
- Miller, Julie. 2020. "The Panic and Guilt inside the Quarantine Puzzle Boom." *Vanity Fair*. May 5. <https://www.vanityfair.com/style/2020/05/coronavirus-quarantine-pandemic-puzzles>.
- Nazish, Noma. 2023. "Can't Meditate? Here's Why You Should Try Jigsaw Puzzles Instead." *Forbes*. April 30. <https://www.forbes.com/sites/nomanazish/2023/04/30/cant-meditate-heres-why-you-should-try-jigsaw-puzzles-instead/?sh=6ae17a313f1b>.
- O'Brien, Mary. 2023. Personal communication to author. June 10.
- Perry, L. Day, and T. K. Webster Jr. 1933. *Jigsaw Puzzles - And How to Make 'Em*.
- U.S. Bureau of Economic Analysis. 2024. National Income and Product Accounts, Section 1, Table T10101-Q. <https://apps.bea.gov/histdatacore/fileStructDisplay.html?heID=12012&HMI=7&oldDiv=National%20Accounts&year=2024&quarter=,%20Q1&ReleaseDate=June-28-2024&Vintage=Third>.
- U.S. Bureau of Labor Statistics. 2020. <https://www.bls.gov/opub/ted/2020/unemployment-rate-rises-to-record-high-14-point-7-percent-in-april-2020.htm>.

- U.S. Centers for Disease Control and Prevention. 2024. <https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm>. Table 1, monthly deaths 2020.
- Williams, Anne D. 1993. "Leisure in the Great Depression: The Many Pieces of the Jigsaw Puzzle Story." *Ephemera Journal* 6, 99–115.
- _____. 2004. *Jigsaw Puzzles, Piecing Together A History*.
- _____. 2020. "Leaping Lasers: A Silver Lining to the Pandemic Cloud," *AGPI Quarterly* 4:10–14.