

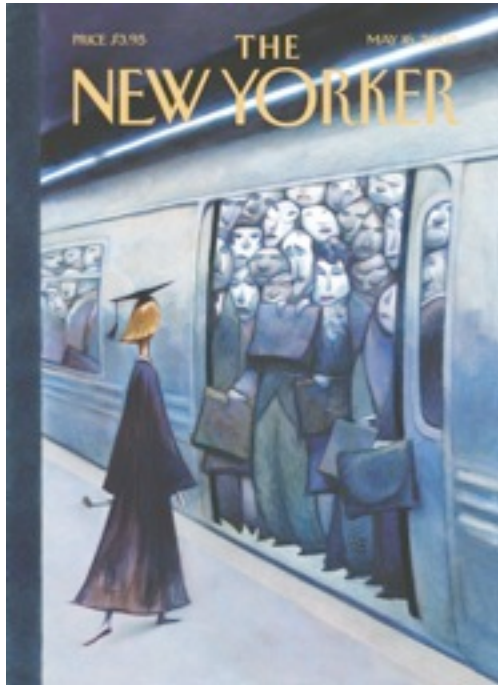
BOOKS

# BRAIN CANDY

*Is pop culture dumbing us down or smartening us up?*

by [Malcolm Gladwell](#)

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Twenty years ago, a political philosopher named James Flynn uncovered a curious fact. Americans—at least, as measured by I.Q. tests—were getting smarter. This fact had been obscured for years, because the people who give I.Q. tests continually recalibrate the scoring system to keep the average at 100. But if you took out the recalibration, Flynn found, I.Q. scores showed a steady upward trajectory, rising by about three points per decade, which means that a person whose I.Q. placed him in the top ten per cent of the American population in 1920 would today fall in the bottom third.

Some of that effect, no doubt, is a simple by-product of economic progress: in the surge of prosperity during the middle part of the last century, people in the West became better fed, better educated, and more familiar with things like I.Q. tests. But, even as that wave of change has subsided, test scores have continued to rise—not just in America but all over the developed world. What's more, the increases have not been confined to children who go to enriched day-care centers and private schools. The middle part of the curve—the people who have supposedly been suffering from a deteriorating public-school system and a steady diet of lowest-common-denominator television and mindless pop music—has increased just as much. What on earth is happening? In the wonderfully entertaining “Everything Bad Is Good for You” (Riverhead; \$23.95), Steven Johnson proposes that what is making us smarter is precisely what we thought was making us dumber: popular culture.

Johnson is the former editor of the online magazine *Feed* and the author of a number of books on science and technology. There is a pleasing eclecticism to his

thinking. He is as happy analyzing “Finding Nemo” as he is dissecting the intricacies of a piece of software, and he’s perfectly capable of using Nietzsche’s notion of eternal recurrence to discuss the new creative rules of television shows. Johnson wants to understand popular culture—not in the postmodern, academic sense of wondering what “The Dukes of Hazzard” tells us about Southern male alienation but in the very practical sense of wondering what watching something like “The Dukes of Hazzard” does to the way our minds work.

As Johnson points out, television is very different now from what it was thirty years ago. It’s *harder*. A typical episode of “Starsky and Hutch,” in the nineteen-seventies, followed an essentially linear path: two characters, engaged in a single story line, moving toward a decisive conclusion. To watch an episode of “Dallas” today is to be stunned by its glacial pace—by the arduous attempts to establish social relationships, by the excruciating simplicity of the plotline, by how *obvious* it was. A single episode of “The Sopranos,” by contrast, might follow five narrative threads, involving a dozen characters who weave in and out of the plot. Modern television also requires the viewer to do a lot of what Johnson calls “filling in,” as in a “Seinfeld” episode that subtly parodies the Kennedy assassination conspiracists, or a typical “Simpsons” episode, which may contain numerous allusions to politics or cinema or pop culture. The extraordinary amount of money now being made in the television aftermarket—DVD sales and syndication—means that the creators of television shows now have an incentive to make programming that can sustain two or three or four viewings. Even reality shows like “Survivor,” Johnson argues, engage the viewer in a way that television rarely has in the past:

When we watch these shows, the part of our brain that monitors the emotional lives of the people around us—the part that tracks subtle shifts in intonation and gesture and facial expression—scrutinizes the action on the screen, looking for clues. . . . The phrase “Monday-morning quarterbacking” was coined to describe the engaged feeling spectators have in relation to games as opposed to stories. We absorb stories, but we second-guess games. Reality programming has brought that second-guessing to prime time, only the game in question revolves around social dexterity rather than the physical kind.

How can the greater cognitive demands that television makes on us now, he wonders, not *matter*?

Johnson develops the same argument about video games. Most of the people who denounce video games, he says, haven’t actually played them—at least, not

recently. Twenty years ago, games like Tetris or Pac-Man were simple exercises in motor coordination and pattern recognition. Today's games belong to another realm. Johnson points out that one of the "walk-throughs" for "Grand Theft Auto III"—that is, the informal guides that break down the games and help players navigate their complexities—is fifty-three thousand words long, about the length of his book. The contemporary video game involves a fully realized imaginary world, dense with detail and levels of complexity.

Indeed, video games are not games in the sense of those pastimes—like Monopoly or gin rummy or chess—which most of us grew up with. They don't have a set of unambiguous rules that have to be learned and then followed during the course of play. This is why many of us find modern video games baffling: we're not used to being in a situation where we have to figure out what to do. We think we only have to learn how to press the buttons faster. But these games withhold critical information from the player. Players have to explore and sort through hypotheses in order to make sense of the game's environment, which is why a modern video game can take forty hours to complete. Far from being engines of instant gratification, as they are often described, video games are actually, Johnson writes, "all about delayed gratification—sometimes so long delayed that you wonder if the gratification is ever going to show."

At the same time, players are required to manage a dizzying array of information and options. The game presents the player with a series of puzzles, and you can't succeed at the game simply by solving the puzzles one at a time. You have to craft a longer-term strategy, in order to juggle and coordinate competing interests. In denigrating the video game, Johnson argues, we have confused it with other phenomena in teen-age life, like multitasking—simultaneously e-mailing and listening to music and talking on the telephone and surfing the Internet. Playing a video game is, in fact, an exercise in "constructing the proper hierarchy of tasks and moving through the tasks in the correct sequence," he writes. "It's about finding order and meaning in the world, and making decisions that help create that order."

It doesn't seem right, of course, that watching "24" or playing a video game could be as important cognitively as reading a book. Isn't the extraordinary success of the "Harry Potter" novels better news for the culture than the equivalent success of "Grand Theft Auto III"? Johnson's response is to imagine what cultural critics might have said had video games been invented hundreds of years ago, and only recently had something called the book been marketed aggressively to children:

Reading books chronically understimulates the senses. Unlike the longstanding tradition of gameplaying—which engages the child in a vivid, three-dimensional world filled with moving images and musical sound-scapes, navigated and controlled with complex muscular movements—books are simply a barren string of words on the page. . . .

Books are also tragically isolating. While games have for many years engaged the young in complex social relationships with their peers, building and exploring worlds together, books force the child to sequester him or herself in a quiet space, shut off from interaction with other children. . . .

But perhaps the most dangerous property of these books is the fact that they follow a fixed linear path. You can't control their narratives in any fashion—you simply sit back and have the story dictated to you. . . . This risks instilling a general passivity in our children, making them feel as though they're powerless to change their circumstances. Reading is not an active, participatory process; it's a submissive one.

He's joking, of course, but only in part. The point is that books and video games represent two very different kinds of learning. When you read a biology textbook, the content of what you read is what matters. Reading is a form of explicit learning. When you play a video game, the value is in how it makes you think. Video games are an example of collateral learning, which is no less important.

Being “smart” involves facility in both kinds of thinking—the kind of fluid problem solving that matters in things like video games and I.Q. tests, but also the kind of crystallized knowledge that comes from explicit learning. If Johnson's book has a flaw, it is that he sometimes speaks of our culture being “smarter” when he's really referring just to that fluid problem-solving facility. When it comes to the other kind of intelligence, it is not clear at all what kind of progress we are making, as anyone who has read, say, the Gettysburg Address alongside any Presidential speech from the past twenty years can attest. The real question is what the right balance of these two forms of intelligence might look like. “Everything Bad Is Good for You” doesn't answer that question. But Johnson does something nearly as important, which is to remind us that we shouldn't fall into the trap of thinking that explicit learning is the only kind of learning that matters.

In recent years, for example, a number of elementary schools have phased out or reduced recess and replaced it with extra math or English instruction. This is the triumph of the explicit over the collateral. After all, recess is “play” for a ten-year-old in precisely the sense that Johnson describes video games as play for an

adolescent: an unstructured environment that requires the child actively to intervene, to look for the hidden logic, to find order and meaning in chaos.

One of the ongoing debates in the educational community, similarly, is over the value of homework. Meta-analysis of hundreds of studies done on the effects of homework shows that the evidence supporting the practice is, at best, modest. Homework seems to be most useful in high school and for subjects like math. At the elementary-school level, homework seems to be of marginal or no academic value. Its effect on discipline and personal responsibility is unproved. And the causal relation between high-school homework and achievement is unclear: it hasn't been firmly established whether spending more time on homework in high school makes you a better student or whether better students, finding homework more pleasurable, spend more time doing it. So why, as a society, are we so enamored of homework? Perhaps because we have so little faith in the value of the things that children would otherwise be doing with their time. They could go out for a walk, and get some exercise; they could spend time with their peers, and reap the rewards of friendship. Or, Johnson suggests, they could be playing a video game, and giving their minds a rigorous workout. ♦

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