

to appreciate distortion in music a generation before. To non-players, games bear a superficial resemblance to music videos: flashy graphics; the layered mix of image, music, and text; the occasional burst of speed, particularly during the pre-rendered opening sequences. But what you actually *do* in playing a game—the way your mind has to work—is radically different. It's not about tolerating or aestheticizing chaos; it's about finding order and meaning in the world, and making decisions that help create that order.

TELEVISION

THE INTERACTIVE NATURE of games means that they will inevitably require more decision-making than passive forms like television or film. But popular television shows—and to a slightly lesser extent, popular films—have also increased the cognitive work they demand from their audience, exercising the mind in ways that would have been unheard of thirty years ago. For someone loosely following the debate over the medium's cultural impact, the idea that television is actually improving our minds will sound like apostasy. You can't surf the Web or flip through a newsstand for more than a few minutes without encountering someone complaining about the surge in sex and violence

on TV: from Tony Soprano to Janet Jackson. There's no questioning that the trend is real enough, though it is as old as television itself. In Newton Minow's famous "vast wasteland" speech from 1961, he described the content of current television programming as a "procession of . . . blood and thunder, mayhem, violence, sadism, murder"—this in the era of Andy Griffith, Perry Como, and Uncle Miltie. But evaluating the social merits of any medium and its programming can't be limited purely to questions of subject matter. There was nothing particularly redeeming in the subject matter of my dice baseball games, but they nonetheless taught me how to think in powerful new ways. So if we're going to start tracking swear words and wardrobe malfunctions, we ought to at least include another line in the graph: one that charts the cognitive demands that televised narratives place on their viewers. That line, too, is trending upward at a dramatic rate.

Television may be more passive than video games, but there are degrees of passivity. Some narratives force you to do work to make sense of them, while others just let you settle into the couch and zone out. Part of that cognitive work comes from following multiple threads, keeping often densely interwoven plotlines distinct in your head as you watch. But another part involves the viewer's "filling in": making sense of information that has been either deliberately withheld or deliberately left obscure. Narratives that require that their viewers fill in crucial elements take

that complexity to a more demanding level. To follow the narrative, you aren't just asked to remember. You're asked to analyze. This is the difference between intelligent shows, and shows that force you to be intelligent. With many television classics that we associate with "quality" entertainment—*Mary Tyler Moore*, *Murphy Brown*, *Frasier*—the intelligence arrives fully formed in the words and actions of the characters onscreen. They say witty things to each other, and avoid lapsing into tired sitcom clichés, and we smile along in our living room, enjoying the company of these smart people. But assuming we're bright enough to understand the sentences they're saying—few of which are rocket science, mind you, or any kind of science, for that matter—there's no intellectual labor involved in enjoying the show as a viewer. There's no filling in, because the intellectual achievement exists entirely on the other side of the screen. You no more challenge your mind by watching these intelligent shows than you challenge your body watching *Monday Night Football*. The intellectual work is happening onscreen, not off.

But another kind of televised intelligence is on the rise. Recall the cognitive benefits conventionally ascribed to reading: attention, patience, retention, the parsing of narrative threads. Over the last half century of television's dominance over mass culture, programming on TV has steadily increased the demands it places on precisely these mental faculties. The nature of the medium is such that television will

never improve its viewers' skills at translating letters into meaning, and it may not activate the imagination in the same way that a purely textual form does. But for all the other modes of mental exercise associated with reading, television is growing increasingly rigorous. And the pace is accelerating—thanks to changes in the economics of the television business, and to changes in the technology we rely on to watch.

This progressive trend alone would probably surprise someone who only read popular accounts of TV without watching any of it. But perhaps the most surprising thing is this: that the shows that have made the most demands on their audience have also turned out to be among the most lucrative in television history.

PUT ASIDE for a moment the question of why the marketplace is rewarding complexity, and focus first on the question of what this complexity looks like. It involves three primary elements: multiple threading, flashing arrows, and social networks.

Multiple threading is the most acclaimed structural convention of modern television programming, which is ironic because it's also the convention with the most debased pedigree. According to television lore, the age of multiple threads began with the arrival of *Hill Street Blues* in 1981,

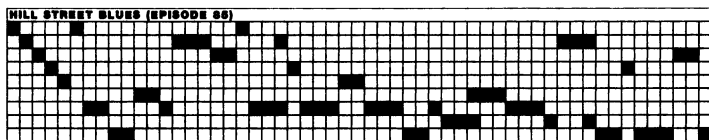
the Steven Bochco-created police drama invariably praised for its “gritty realism.” Watch an episode of *Hill Street Blues* side by side with any major drama from the preceding decades—*Starsky and Hutch*, for instance, or *Dragnet*—and the structural transformation will jump out at you. The earlier shows follow one or two lead characters, adhere to a single dominant plot, and reach a decisive conclusion at the end of the episode. Draw an outline of the narrative threads in almost every *Dragnet* episode and it will be a single line: from the initial crime scene, through the investigation, to the eventual cracking of the case. A typical *Starsky and Hutch* episode offers only the slightest variation on this linear formula: the introduction of a comic subplot that usually appears only at the tail ends of the episode, creating a structure that looks like the graph below. The vertical axis represents the number of individual threads, and the horizontal axis is time.



Starsky and Hutch includes a few other twists: While both shows focus almost exclusively on a single narrative, *Dragnet* tells the story entirely from the perspective of the investigators. *Starsky and Hutch*, on the other hand, oscillates between the perspectives of the cops and that of the

criminals. And while both shows adhere religiously to the principle of narrative self-containment—the plots begin and end in a single episode—*Dragnet* takes the principle to a further extreme, introducing the setting and main characters with Joe Friday's famous voice-over in every episode.

A *Hill Street Blues* episode complicates the picture in a number of profound ways. The narrative weaves together a collection of distinct strands—sometimes as many as ten, though at least half of the threads involve only a few quick scenes scattered through the episode. The number of primary characters—and not just bit parts—swells dramatically. And the episode has fuzzy borders: picking up one or two threads from previous episodes at the outset, and leaving one or two threads open at the end. Charted graphically, an average episode looks like this:



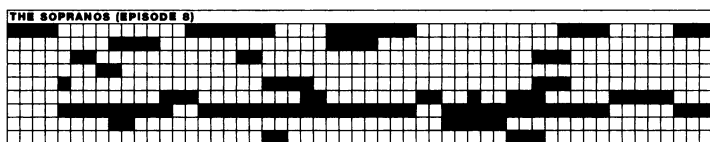
Critics generally cite *Hill Street Blues* as the origin point of “serious drama” native to the television medium—differentiating the series from the single episode dramatic programs from the fifties, which were Broadway plays performed in front of a camera. But the *Hill Street* innovations

weren't all that original; they'd long played a defining role in popular television—just not during the evening hours. The structure of a *Hill Street* episode—and indeed all of the critically acclaimed dramas that followed, from *thirtysomething* to *Six Feet Under*—is the structure of a soap opera. *Hill Street Blues* might have sparked a new golden age of television drama during its seven-year run, but it did so by using a few crucial tricks that *Guiding Light* and *General Hospital* had mastered long before.

Bohco's genius with *Hill Street* was to marry complex narrative structure with complex subject matter. *Dallas* had already shown that the extended, interwoven threads of the soap opera genre could survive the weeklong interruptions of a prime-time show, but the actual content of *Dallas* was fluff. (The most probing issue it addressed was the now folkloric question of who shot J.R.) *All in the Family* and *Rhoda* showed that you could tackle complex social issues, but they did their tackling in the comfort of the sitcom living room structure. *Hill Street* had richly drawn characters confronting difficult social issues, and a narrative structure to match.

Since *Hill Street* appeared, the multithreaded drama has become the most widespread fictional genre on prime time: *St. Elsewhere*, *thirtysomething*, *L.A. Law*, *Twin Peaks*, *NYPD Blue*, *ER*, *The West Wing*, *Alias*, *The Sopranos*, *Lost*, *Desperate Housewives*. The only prominent holdouts in drama are shows like *Law & Order* that have essentially

updated the venerable *Dragnet* format, and thus remained anchored to a single narrative line. Since the early eighties, there has been a noticeable increase in narrative complexity in these dramas. The most ambitious show on TV to date—*The Sopranos*—routinely follows a dozen distinct threads over the course of an episode, with more than twenty recurring characters. An episode from late in the first season looks like this:



The total number of active threads equals the number of multiple plots of *Hill Street*, but here each thread is more substantial. The show doesn't offer a clear distinction between dominant and minor plots; each storyline carries its weight in the mix. The episode also displays a chordal mode of storytelling entirely absent from *Hill Street*: a single scene in *The Sopranos* will often connect to three different threads at the same time, layering one plot atop another. And every single thread in this *Sopranos* episode builds on events from previous episodes, and continues on through the rest of the season and beyond. Almost every sequence in the show con-

nects to information that exists outside the frame of the current episode. For a show that spends as much time as it does on the analyst's couch, *The Sopranos* doesn't waste a lot of energy with closure.

Put these four charts together and you have a portrait of the Sleeper Curve rising over the past thirty years of popular television.

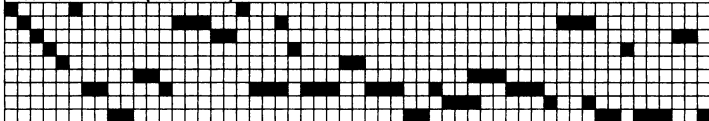
DRAGNET (ANY EPISODE)



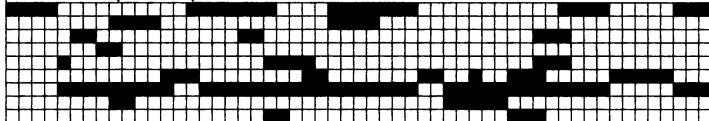
STARKY AND HUTCH (ANY EPISODE)



HILL STREET BLUES (EPISODE 86)



THE SOPRANOS (EPISODE 8)



In a sense, this is as much a map of cognitive changes in the popular mind as it is a map of onscreen developments, as though the media titans had decided to condition our brains to follow ever larger numbers of simultaneous threads. Before *Hill Street*, the conventional wisdom among

television execs was that audiences wouldn't be comfortable following more than three plots in a single episode, and indeed, the first test screening of the *Hill Street* pilot in May 1980 brought complaints from the viewers that the show was too complicated. Fast forward twenty years and shows like *The Sopranos* engage their audiences with narratives that make *Hill Street* look like *Three's Company*. Audiences happily embrace that complexity because they've been trained by two decades of multithreaded dramas.

Is there something apples-to-oranges in comparing a boutique HBO program like *The Sopranos* to a network prime-time show like *Hill Street Blues*? Isn't the increase in complexity merely a reflection of the later show's smaller and more elite audience? I think the answer is no, for several reasons. First, measured by pure audience share, *The Sopranos* is a genuine national hit, regularly outdrawing network television shows in the same slot. Second, *Hill Street Blues* was itself a boutique show—the first step in NBC's immensely successful attempt in the early eighties to target an upscale demographic instead of the widest possible audience. The show was a cultural and critical success, but it spent most of its life languishing in the mid-thirties in the Nielsen TV ratings—and in its first season, the series finished eighty-third out of ninety-seven total shows on television. The total number of viewers for a *Sopranos* episode is not that different from that of an average episode of *Hill Street Blues*, even though the former's narrative complexity

is at least twice that of the latter. (*The Sopranos* is even more complex on other scales, to which we will turn shortly.)

You can also measure the public's willingness to tolerate more complicated narratives in the success of shows such as *ER* or *24*. In terms of multiple threading, both shows usually follow around ten threads per episode, roughly comparable to *Hill Street Blues*. But *ER* and *24* are bona fide hits, regularly appearing in the Nielsen top twenty. In 1981, you could weave together three major narratives and a half dozen supporting plots over the course of an hour on prime time, and cobble together enough of an audience to keep the show safe from cancellation. Today you can challenge the audience to follow a more complicated mix, and build a juggernaut in the process.

Multithreading is the most celebrated structural feature of the modern television drama, and it certainly deserves some of the honor that has been doled out to it. When we watch TV, we intuitively track narrative-threads-per-episode as a measure of a given show's complexity. And all the evidence suggests that this standard has been rising steadily over the past two decades. But multithreading is only part of the story.

A FEW YEARS after the arrival of the first-generation slasher movies—*Halloween*, *Friday the 13th*—Paramount

released a mock-slasher flick, *Student Bodies*, which parodied the genre just as the *Scream* series would do fifteen years later. In one scene, the obligatory nubile teenage babysitter hears a noise outside a suburban house; she opens the door to investigate, finds nothing, and then goes back inside. As the door shuts behind her, the camera swoops in on the doorknob, and we see that she's left the door unlocked. The camera pulls back, and then swoops down again, for emphasis. And then a flashing arrow appears on the screen, with text that helpfully explains: "Door Unlocked!"

That flashing arrow is parody, of course, but it's merely an exaggerated version of a device popular stories use all the time. It's a kind of narrative signpost, planted conveniently to help the audience keep track of what's going on. When the villain first appears in a movie emerging from the shadows with ominous, atonal music playing—that's a flashing arrow that says: "bad guy." When a sci-fi script inserts a non-scientist into some advanced lab who keeps asking the science geeks to explain what they're doing with that particle accelerator—that's a flashing arrow that gives the audience precisely the information they need to know in order to make sense of the ensuing plot. ("Whatever you do, don't spill water on it, or you'll set off a massive explosion!") Genre conventions function as flashing arrows; the *Student Bodies* parody works because the "door unlocked" text is absurd overkill—we've already internalized the rules of the slasher genre enough to know that nubile-babysitter-in-

suburban-house inevitably leads to unwanted visitors. Heist movies traditionally deliver a full walk-through of the future crime scene, complete with architectural diagrams, so you'll know what's happening when the criminals actually go in for the goods.

These hints serve as a kind of narrative handholding. Implicitly, they say to the audience, "We realize you have no idea what a particle accelerator is, but here's the deal: all you need to know is that it's a big fancy thing that explodes when wet." They focus the mind on relevant details: "Don't worry about whether the babysitter is going to break up with her boyfriend. Worry about that guy lurking in the bushes." They reduce the amount of analytic work you need to make sense of a story. All you have to do is follow the arrows.

By this standard, popular television has never been harder to follow. If narrative threads have experienced a population explosion over the past twenty years, flashing arrows have grown correspondingly scarce. Watching our pinnacle of early eighties TV drama, *Hill Street Blues*, there's an informational *wholeness* to each scene that differs markedly from what you see on shows like *The West Wing* or *The Sopranos* or *Alias* or *ER*. *Hill Street* gives you multiple stories to follow, as we've seen, but each event in those stories has a clarity to it that is often lacking in the later shows.

This is a subtle distinction, but an important one, a facet of the storyteller's art that we sometimes only soak up unconsciously. *Hill Street* has ambiguities about future events:

Will the convicted serial killer be executed? Will Furillo marry Joyce Davenport? Will Renko catch the health inspector who has been taking bribes? But the present tense of each scene explains itself to the viewer with little ambiguity. You may not know the coming fate of the health inspector, but you know why Renko is dressing up as a busboy in the current scene, or why he's eavesdropping on a kitchen conversation in the next. There's an open question or a mystery driving each of these stories—how will it all turn out?—but there's no mystery about the immediate activity on the screen.

A contemporary drama like *The West Wing*, on the other hand, constantly embeds mysteries into the present-tense events: you see characters performing actions or discussing events about which crucial information has been deliberately withheld. Appropriately enough, the extended opening sequence of the *West Wing* pilot revolved around precisely this technique: you're introduced to all the major characters (Toby, Josh, CJ) away from the office, as they each receive the enigmatic message that "POTUS has fallen from a bicycle." *West Wing* creator Aaron Sorkin—who amazingly managed to write every single episode through season four—deliberately withholds the information that all these people work at the White House, and that POTUS stands for "President of the United States," until the very last second before the opening credits run. Granted, a viewer tuning in to a show called *The West Wing* probably sus-

pected that there was going to be some kind of White House connection, and a few political aficionados might have already been familiar with the acronym POTUS. But that opening sequence established a structure that Sorkin used in every subsequent episode, usually decorated with deliberately opaque information. The open question posed by these sequences is not: How will this turn out in the end? The question is: What's happening right now?

In practice, the viewers of shows like *Hill Street Blues* in the eighties no doubt had moments of confusion where the sheer number of simultaneous plots created present-tense mystery: we'd forget why Renko was wearing that busboy outfit because we'd forgotten about the earlier sequence introducing the undercover plot. But in that case, the missing information got lost somewhere between our perceptual systems and our short-term data storage. The show gave us a clear vista on to the narrative events; if that view fogged over, we had only our memory to blame. Sorkin's shows, on the other hand, are the narrative equivalent of fog machines. You're *supposed* to be in the dark. Anyone who has watched more than a handful of *West Wing* episodes closely will know the feeling: scene after scene refers to some clearly crucial piece of information—the cast members will ask each other if they saw “the interview” last night, or they'll make enigmatic allusions to the McCarver case—and after the sixth reference, you'll find yourself wishing you could rewind the tape to figure out what they're talking about,

assuming you've missed something. And then you realize that you're supposed to be confused.

The clarity of *Hill Street* comes from the show's subtle integration of flashing arrows, while *West Wing*'s murkiness comes from Sorkin's cunning refusal to supply them. The roll call sequence that began every *Hill Street* episode is most famous for the catchphrase "Hey, let's be careful out there." But that opening address from Sergeant Esterhaus (and in later seasons, Sergeant Jablonski) performed a crucial function, introducing some of the primary threads and providing helpful contextual explanations for them. Critics at the time remarked on the disorienting, documentary-style handheld camerawork used in the opening sequence, but the roll call was ultimately a comforting device for the show, training wheels for the new complexity of multithreading.

Viewers of *The West Wing* or *Lost* or *The Sopranos* no longer require those training wheels, because twenty-five years of increasingly complex television has honed their analytic skills. Like those video games that force you to learn the rules while playing, part of the pleasure in these modern television narratives comes from the cognitive labor you're forced to do filling in the details. If the writers suddenly dropped a hoard of flashing arrows onto the set, the show would seem plodding and simplistic. The extra information would take the fun out of watching.

This deliberate lack of handholding extends down to the micro level of dialogue as well. Popular entertainment that

addresses technical issues—whether they are the intricacies of passing legislation, or performing a heart bypass, or operating a particle accelerator—conventionally switches between two modes of information in dialogue: texture and substance. Texture is all the arcane verbiage provided to convince the viewer that they’re watching *Actual Doctors At Work*; substance is the material planted amid the background texture that the viewer needs to make sense of the plot.

Ironically, the role of texture is sometimes to be directly *irrelevant* to the concerns of the underlying narrative, the more irrelevant the better. Roland Barthes wrote a short essay in the sixties that discussed a literary device he called the “reality effect,” citing a description of a barometer from Flaubert’s short story “A Simple Heart.” In Barthes’s description, reality effects are designed to create the aura of real life through their sheer meaninglessness: the barometer doesn’t play a role in the narrative, and it doesn’t symbolize anything. It’s just there for background texture, to create the illusion of a world cluttered with objects that have no narrative or symbolic meaning. The technical banter that proliferates on shows like *The West Wing* or *ER* has a comparable function; you don’t need to know what it means when the surgeons start shouting about OPCAB and saphenous veins as they perform a bypass on *ER*; the arcana is there to create the illusion that you are watching real doctors. For these shows to be enjoyable, viewers have to be

comfortable knowing that this is information they're not supposed to understand.

Conventionally, narratives demarcate the line between texture and substance by inserting cues that flag or translate the important data. There's an unintentionally comical moment in the 2004 blockbuster *The Day After Tomorrow* where the beleaguered climatologist (played by Dennis Quaid) announces his theory about the imminent arrival of a new ice age to a gathering of government officials. His oration ends with the line: "We may have hit a critical desalinization threshold!" It's the kind of thing that a climatologist might plausibly say—were he dropped into an alternative universe where implausible things like instant ice ages actually happened—but for most members of the audience, the phrase "critical desalinization threshold" is more likely to elicit a blank stare than a spine tingle. And so the writer/director Roland Emmerich—a master of brazen arrow-flashing—has a sidekick official next to Quaid follow with the obliging remark: "That would explain all the extreme weather we're having." They might as well have had a flashing "Door Unlocked!" arrow on the screen.

The dialogue on shows like *The West Wing* and *ER*, on the other hand, doesn't talk down to its audience. It rushes by, the words accelerating in sync with the high-speed tracking shots that glide through the corridors and operating rooms. The characters talk faster in these shows, but the truly remarkable thing about the dialogue is not purely a

matter of speed; it's the willingness to immerse the audience in information that most viewers won't understand. Here's a typical scene from *ER*:

Cut to KERRY bringing in a young girl, CARTER and LUCY run up.

The girl's parents are also present.

KERRY: Sixteen-year-old unconscious, history of viral hepatitis.

CARTER: Glucocorticoids?

KERRY: Looks like it.

MR. MAKOMI: She was doing fine until six months ago.

CARTER: What medication is she on?

MRS. MAKOMI: Emphasylin, tobramycin, vitamins A, D, and K.

LUCY: The skin's jaundiced.

KERRY: Same with sclera, does her breath smell sweet?

CARTER: Peder permadicis?

KERRY: Yeah.

LUCY: What's that?

KERRY: Liver's shut down, let's dip her urine. (To CARTER) It's getting a little crowded in here, why don't you deal with the parents, please. Set lactulose, 30 cc per mg.

CARTER: We're gonna give her some medicine to clean her blood, why don't you come with me?

CARTER leads the MAKOMIs out of the trauma room,
LUCY also follows him

KERRY: Blood doesn't seem to clot.

MR. MAKOMI: She's bleeding inside?

CARTER: The liver failure is causing her blood not
to clot.

MRS. MAKOMI: Oh God.

CARTER: Is she on the transplant list?

MR. MAKOMI: She's been status 2a for six months but
they haven't been able to find her a match.

CARTER: Why not, what's her blood type?

MR. MAKOMI: AB.

CARTER and LUCY stare at each other in disbelief.

Cut to MARK working on a sleeping patient. AMANDA
walks in.

There are flashing arrows here, of course—"The liver failure is causing her blood not to clot"—but the ratio of medical jargon to layperson translation is remarkably high, and as in so many of these narratives, you don't figure out what's really happening until the second half of the scene. There's a kind of implicit trust formed between the show and its viewers, a tolerance for planned ambiguity. That tolerance takes work: you need to be able to make assessments on the fly about the role of each line, putting it in the "substance" or "texture" slot. You have to know what you're not

supposed to know. If viewers weren't able to make those assessments in real time, *ER* would be an unbearable mess; you'd have to sit down every Thursday night with a medical dictionary at hand. ("Is *peder permadidis* spelled with a *d* or a *t*?")

From a purely narrative point of view, the decisive line in that scene arrives at the very end: "AB." The sixteen-year-old's blood type connects her to an earlier plotline, involving a cerebral hemorrhage victim who—after being dramatically revived in one of the opening scenes—ends up brain dead. Fifteen minutes before the liver-failure scene above, Doug and Carter briefly discuss harvesting the hemorrhage victim's organs for transplants, and make a passing reference to his blood type being the rare AB. (Thus making him an unlikely donor.) The twist here revolves around a statistically unlikely event happening at the ER—an otherwise perfect liver donor showing up just in time to donate his liver to a recipient with the same rare blood type. But the show reveals this twist with a remarkable subtlety. To make sense of that last "AB" line—and the look of disbelief on Carter's and Lucy's faces—you have to recall a passing remark uttered fifteen minutes before regarding a character who belongs to a completely different thread.

It would have been easy enough to insert an explanatory line at the end of the scene: "That's the same blood type as our hemorrhage victim!" And in fact, had *ER* been made

twenty or thirty years ago, I suspect the writers would have added precisely such a line. But that kind of crude subtitling would go against the narrative ethos of shows like *ER*. In these modern narratives, part of the pleasure comes from the audience's "filling in." These shows may have more blood and guts than popular TV had a generation ago, and some of the sexual content today would have been inappropriate in a movie theater back then—much less on prime-time TV. But when it comes to storytelling, these shows possess a quality that can only be described as subtlety and discretion.

It's not a headline you often see—"Pop TV More Subtle and Discreet Than Ever Before!"—but ignoring these properties means overlooking one of the most vital developments in modern popular narrative. You'll sometimes hear people refer fondly to the "simpler" era of television's alleged heyday, the days of *Dragnet* and *I Love Lucy*. They mean "simpler" in an ethical sense: there were no sympathetic mob bosses on *Dragnet*, no custody battles on *Lucy*. But when you watch these shows next to today's television, the other sense of "simpler" applies as well: they require less mental labor to make sense of what's going on. Watch *Starsky and Hutch* or *Dragnet* after watching *The Sopranos* and you'll feel as though you're being condescended to—because the creators of those shows are imagining an "ideal viewer" who has not benefited from decades of the Sleeper Curve at work. They kept it simple because they assumed

their audience at the time wasn't ready for anything more complicated.

In this, they were probably right.

TELEVISION DRAMA is the most dramatic instance of the Sleeper Curve, but you can see a comparable shift toward increased complexity in most of the sitcoms that have flourished over the past decade. Compare the way comedy unfolds in recent classics like *Seinfeld* and *The Simpsons*—along with newer critics' faves like *Scrubs* or *Arrested Development*—to earlier sitcoms like *All in the Family* or *Mary Tyler Moore*. The most telling way to measure these shows' complexity is to consider how much external information the viewer must draw upon to “get” the jokes in their entirety. Anyone can sit down in front of most run-of-the-mill sitcoms—*Home Improvement*, say, or *Three's Company*—and the humor will be immediately intelligible, since it consists mostly of characters being sarcastic to each other. The jokes themselves make no reference to anything outside the frame of the conversation that contains them—beyond the bare-bones “situation” that the sitcom itself is grounded in. (A guy pretends that he's gay so he can shack up with two women.) To parse the humor of more nuanced shows—*Cheers* or *Friends*, for example—the scripts will sometimes demand that you know some basic biographical

information about the characters. (Carla will make a snotty reference to Sam Malone's sobriety, without bothering to explain to the audience that he once had a drinking problem; or Rachel will allude to Monica's overweight childhood.) Nearly every extended sequence in *Seinfeld* or *The Simpsons*, however, will contain a joke that makes sense only if the viewer fills in the proper supplementary information—information that is deliberately withheld from the viewer. If you haven't seen the "Mulva" episode, or if the name "Art Vandelay" means nothing to you, then the subsequent references—many of them arriving years after their original appearance—will pass on by unappreciated.

At first glance, this looks like the soap opera tradition of plotlines extending past the frame of individual episodes, but in practice the device has a different effect. Knowing that George uses the alias Art Vandelay in awkward social situations doesn't help you understand the plot of the current episode; you don't draw on past narratives to understand the events of the present one. In the 180 *Seinfeld* episodes that aired, seven contain references to Art Vandelay: in George's actually referring to himself with that alias or invoking the name as part of some elaborate lie. He tells a potential employer at a publishing house that he likes to read the fiction of Art Vandelay, author of *Venetian Blinds*; in another, he tells an unemployment insurance case-worker that he's applied for a latex salesman job at Vandelay Industries. For storytelling purposes, the only thing that you

need to know here is that George is lying in a formal interview; any fictitious author or latex manufacturer would suffice. But the *joke* arrives through the echo of all those earlier Vandelay references; it's funny because it's making a subtle nod to past events held offscreen. It's what we'd call in a real-world context an "in-joke"—a joke that's funny only to people who get the reference. And in this case, the reference is to a few fleeting lines in a handful of episodes—most of which aired years before. Television comedy once worked on the scale of thirty seconds: you'd have a setup line, and then a punch line, and then the process would start all over again. With *Seinfeld*, the gap between setup and punch line could sometimes last five years.

These layered jokes often point beyond the bounds of the series itself. According to one fan site that has exhaustively chronicled these matters, the average *Simpsons* episode includes around eight gags that explicitly refer to movies: a plotline, a snippet of dialogue, a visual pun on a famous cinematic sequence (*Seinfeld* featured a number of episodes that mirrored movie plots, including *Midnight Cowboy* and *JFK*). The Halloween episodes have historically been the most baroque in their cinematic allusions, with the all-time champ being an episode from the 1995 season, integrating material from *Attack of the 50 Foot Woman*, *Godzilla*, *Ghostbusters*, *Nightmare on Elm Street*, *The Pagemaster*, *Maximum Overdrive*, *The Terminator* and *Terminator 2*,

Alien III, *Tron*, *Beyond the Mind's Eye*, *The Black Hole*, *Poltergeist*, *Howard the Duck*, and *The Shining*.

The film parodies and cultural sampling of *The Simpsons* usually get filed away as textbook postmodernism: media riffing on other media. But the Art Vandelay jokes from *Seinfeld* don't quite fit the same postmodern mold: they aren't references that jump from one fictional world to another; they're references that jump back in time within a single fictional world. I think it's more instructive to see both these devices as sharing a key attribute: they are comic devices that reward further scrutiny. The show gets funnier the more you study it—precisely because the jokes point outside the immediate context of the episode, and because the creators refuse to supply flashing arrows to translate the gags for the uninitiated. Earlier sitcoms merely demanded that you kept the basic terms of the situation clear on your end; beyond that information you could be an amnesiac and you weren't likely to miss anything. Shows like *Seinfeld* and *The Simpsons* offered a more challenging premise to their viewers: You'll enjoy this more if you're capable of remembering a throwaway line from an episode that aired three years ago, or if you notice that we've framed this one scene so that it echoes the end of *Double Indemnity*. The jokes come in layers: you can watch that 1995 Halloween episode and miss all the film riffs and still enjoy the show, but it's a richer, more rewarding experience if you're picking them up.

That layering enabled *Seinfeld* and *The Simpsons* to retain both a broad appeal and the edgy allure of cult classics. The mainstream audiences chuckle along to that wacky Kramer, while the diehard fans nudge-and-wink at each Superman aside. But that complexity has another, equally important, side effect: the episodes often grow *more* entertaining on a second or third viewing, and they can still reveal new subtleties on the fifth or sixth. The subtle intertwinings of the plots seem more nimble if you know in advance where they're headed, and the more experience you have with the series as a whole, the more likely you are to catch all the insider references.

In November 1997, NBC aired an episode of *Seinfeld* called "The Betrayal," in which the scenes were presented in reverse chronological order. If the *Seinfeld* formula often involved setups followed by punch lines that arrived years later, "The Betrayal" took a more radical approach: punch lines that arrived *before* their setups. You'd see Kramer begging Newman to protect him from a character called "FDR," and only find out why ten minutes later, when you're shown an "earlier" scene where FDR gives Kramer the evil eye at a birthday party. The title of the episode (and the name of one of the characters) was a not-so-subtle nod to the Harold Pinter play *Betrayal*, which told the story of a love triangle as a reverse chronology. But comedies are different from dramas in their relationship to time: a dramatic event with no context is a mystery—the withheld informa-

tion can heighten the drama. But a punch line with no context is not a joke. Nearly unwatchable the first time around, “The Betrayal” became coherent only on a second viewing—and it took three solid passes before the jokes started to work. You’d see the punch line delivered onscreen, and you’d fill in the details of the setup on your own.

“The Betrayal” was a watershed in television programming, assembling all the elements of modern TV complexity in one thirty-minute sitcom. The narrative wove together seven distinct threads, withheld crucial information in almost every sequence, and planted jokes that had multiple layers of meaning. As the title implied, these were storytelling devices that you would have found only in avant-garde narrative thirty or forty years ago: in Pinter, or Alain Robbe-Grillet, or Godard. You might have been able to fill a small theater in Greenwich Village with an audience willing to parse all that complexity in 1960, but only if the *Times* had given the play a good review that week. Forty years later, NBC puts the same twisted narrative structure on prime-time television, and 15 million people lap it up.

A few popular sitcoms have done well with the traditional living room banter of yesteryear: *Everybody Loves Raymond* comes to mind. But most comedies that have managed to achieve both critical and commercial success—*Scrubs*, *The Office*, *South Park*, *Will & Grace*, *Curb Your Enthusiasm*—have almost without exception taken their structural cues from *The Simpsons* instead of *Three’s Com-*

pany: creating humor with a half-life longer than fifteen seconds, drawing on intricate plotlines and obscure references. But the sitcom genre as a whole has wilted in the past few years, as television execs turned their focus to the new—and oft-abused—ratings champ: reality programming.

SKEPTICS MIGHT ARGUE that I have stacked the deck here by focusing on relatively highbrow titles like *The Simpsons* or *The West Wing*, when in fact the most significant change in the last five years of narrative entertainment has nothing to do with complex dramas or self-referential sitcoms. Does the contemporary pop cultural landscape look quite as promising if the representative TV show is *Joe Millionaire* instead of *The West Wing*?

I think it does, but to answer that question properly, you have to avoid the tendency to sentimentalize the past. When people talk about the golden age of television in the early seventies—invoking shows like *Mary Tyler Moore* and *All in the Family*—they forget to mention how awful most television programming was during much of that decade. If you're going to look at pop culture trends, you have to compare apples to apples, or in this case, lemons to lemons. If *Joe Millionaire* is a dreadful show that has nonetheless snookered a mass audience into watching it, then you have to compare it to shows of comparable quality and audience

reach from thirty years ago for the trends to be meaningful. The relevant comparison is not between *Joe Millionaire* and *M*A*S*H*; it's between *Joe Millionaire* and *The Price Is Right*, or between *Survivor* and *The Love Boat*.

What you see when you make these head-to-head comparisons is that a rising tide of complexity has been lifting programming both at the bottom of the quality spectrum and at the top. *The Sopranos* is several times more demanding of its audiences than *Hill Street* was, and *Joe Millionaire* has made comparable advances over *Battle of the Network Stars*. This is the ultimate test of the Sleeper Curve theory: even the crap has improved.

How might those improvements be measured? To take stock of this emerging genre, once again we have to paint our portrait of the rhinoceros carefully, to capture why people really get hooked on these shows. Because I think the appeal is often misunderstood. The conventional wisdom is that audiences flock to reality programming because they enjoy the prurient sight of other people being humiliated on national TV. This indeed may be true for gross-out shows like *Fear Factor*, where contestants lock themselves into vaults with spiders or consume rancid food for their fifteen minutes of fame. But for the most successful reality shows—*Survivor* or *The Apprentice*—the appeal is more sophisticated. That sophistication has been difficult to see, because reality programming, too, has suffered from our tendency to see emerging genres as “pseudo” versions of earlier gen-

res, as McLuhan diagnosed. When reality programming first burst on the scene, it was traditionally compared with the antecedent form of the documentary film. Naturally, when you compare *Survivor* with *Shoah*, *Survivor* comes up short. But reality shows do not represent reality the way documentaries represent reality. *Survivor*'s relationship to reality is much closer to the relationship between professional sports and reality: highly contrived, rule-governed environments where (mostly) unscripted events play out.

Thinking of reality shows in the context of games gives us useful insight into the merits of the genre, as opposed to the false comparisons to Barbara Koppel films and *Capturing the Friedmans*. Perhaps the most important thing that should be said about reality programming is that the format is reliably structured like a video game. Reality television provides the ultimate testimony to the cultural dominance of games in this moment of pop culture history. Early television took its cues from the stage: three-act dramas, or vaudeville-like acts with rotating skits and musical numbers. In the Nintendo age, we expect our televised entertainment to take a new form: a series of competitive tests, growing more challenging over time. Many reality shows borrow a subtler device from gaming culture as well: the rules aren't fully established at the outset. You learn as you play. On a show like *Survivor* or *The Apprentice*, the participants—and the audience—know the general objective of the series, but each episode involves new challenges

that haven't been ordained in advance. The final round of season one of *The Apprentice*, for instance, threw a monkeywrench into the strategy that had governed the play up until that point, when Trump announced that the two remaining apprentices would have to assemble and manage a team of subordinates who had already been fired in earlier episodes of the show. All of a sudden the overarching objective of the game—do anything to avoid being fired—presented a potential conflict to the remaining two contenders: the structure of the final round favored the survivor who had maintained the best relationships with his comrades. Suddenly, it wasn't enough just to have clawed your way to the top; you had to have made friends while clawing.

The rules and conventions of the reality genre are in flux, and that unpredictability is part of the allure. This is one way in which reality shows differ dramatically from their game show ancestors. When new contestants walked on-stage for *The Price Is Right* or *Wheel of Fortune*, no ambiguity existed about the rules of engagement; everyone knew how the game was played—the only open question was who would be the winner, and what fabulous prizes they'd take home. In reality TV, the revealing of the game's rules is part of the drama, a deliberate ambiguity that is celebrated and embraced by the audience. The original *Joe Millionaire* put a fiendish spin on this by undermining the most fundamental convention of all—that the show's creators don't openly lie to the contestants about the prizes—by inducing

a construction worker to pose as a man of means while fifteen women competed for his attention.

Reality programming borrowed another key ingredient from games: the intellectual labor of probing the system's rules for weak spots and opportunities. As each show discloses its conventions, and each participant reveals his or her personality traits and background, the intrigue in watching comes from figuring out how the participants should best navigate the environment that's been created for them. The pleasure in these shows comes not from watching other human beings humiliated on national television; it comes from depositing other human beings in a complex, high-stakes environment where no established strategies exist, and watching them find their bearings. That's why the water-cooler conversation about these shows invariably tracks in on the strategy displayed on the previous night's episode: Why did Kwame pick Omarosa in that final round? What devious strategy is Richard Hatch concocting now?

Some of that challenge comes from an ever-changing system of rules, but it also comes from the rich social geography that all reality programming explores. In this one respect, the reality shows exceed the cognitive demands of the video games, because the games invariably whittle away at the branches of social contact. In the gameworld, you're dealing with real people through the mediating channels of 3D graphics and text chat; reality shows drop flesh-and-blood people into the same shared space for months at a

time, often limiting their contact with the outside world. Reality program participants are forced to engage face-to-face with their comrades, and that engagement invariably taps their social intelligence in ways that video games can only dream of. And that social chess becomes part of the audience's experience as well. This, of course, was the appeal of that pioneering reality show, MTV's *The Real World*, which didn't need contests and fabulous prizes to lure its viewers; it just needed a group of people thrust together in a new space and forced to interact with one another.

The role of audience participation is one of those properties that often ends up neglected when the critics assess these shows. If you take reality programming to be one long extended exercise in public humiliation, then the internal monologue of most viewers would sound something like this: "Look at this poor fool—what a jackass!" Instead, I suspect those inner monologues are more likely to project the viewer into the show's world; they're participatory, if only hypothetically so: "If I were choosing who to kick off the island, I'd have to go with Richard." You assess the social geography and the current state of the rules, and you imagine how you would have played it, had you made it through the casting call. The pleasure and attraction of that kind of involvement differ from the narrative pleasure of the sitcom: the appeal of *Happy Days* doesn't come from imagining how you might have improved on the pep talk that Fonzie gives Richie over lunch at Al's. But in the world

of reality programming, that projection is a defining part of the audience's engagement with the show.

Old-style game show viewers also like to imagine themselves as participants; people have been shouting out the answers in their living rooms since the days of *21*. (Reality programming embraces and extends the logic of game shows, just as shows like *The Sopranos* and *Six Feet Under* expand on the template originally created by the soap opera.) But the rules and the "right answers" have increased in complexity since Herbert Stempel took his famous dive. "Playing" a reality show requires you to both adapt to an ever-changing rulebook, and scheme your way through a minefield of personal relationships. To succeed in a show like *The Apprentice* or *Survivor*, you need social intelligence, not just a mastery of trivia. 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. We trust certain characters implicitly, and vote others off the island in a heartbeat. Traditional narrative shows also trigger emotional connections to the characters, but those connections don't have the same participatory effect, because traditional narratives aren't explicitly about *strategy*. 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.

Reality programming unfolds in the most artificial of environments: tropical islands swarming with invisible camera crews; castles populated by beautiful single women and one (fake) millionaire bachelor. But they nonetheless possess an emotional authenticity that is responsible for much of their appeal. At the peak moments—when Joe Millionaire reveals his true construction worker identity; when a contestant gets kicked off the island late in a *Survivor* series—the camera zooms in on the crestfallen face of the unlucky contestant, and what you see for a few fleeting seconds is something you almost never see in prime-time entertainment: a display of genuine emotion written on someone's face. The thrill of it is the thrill of something real and unplanned bursting out in the most staged and sterile of places, like a patch of wildflowers blooming in a parking lot. I find these moments cringe-inducing, because the emotions are so raw, but also bizarrely hypnotic: these are people who have spent the last six months dreaming of a life-changing event, only to find at the last minute that they've fallen short. The thrill of reality TV is seeing their face at the moment they get the news; the thrill of thinking, "This is actually happening." Next to that kind of emotional intensity, it's no wonder the sitcom—with its one-liners and canned laughter—has begun to wither.

I admit that there's something perverse in these moments, something like the frisson that pornography used to induce before it became a billion-dollar industry: what electrifies is the sense that *this is actually happening*. In a world of forgeries, this person on the screen isn't faking it, at least for that split second as the emotion washes over his face. You cover your eyes because the authenticity of the feeling is almost too hot for the medium.

"Split second" is the appropriate timescale here; the intelligence that the reality shows draw upon is the intelligence of microseconds: the revealing glance, the brief look of disbelief, a traitorous frown quickly wiped from a face. Humans express the full complexity of their emotions through the unspoken language of facial expressions, and we know from neuroscience that parsing that language—in all of its subtlety—is one of the great accomplishments of the human brain. One measure of this intelligence is called AQ, short for "autism quotient." People with low AQ scores are particularly talented at reading emotional cues, anticipating the inner thoughts and feelings of other people, a skill that is sometimes called mind reading. (Autistic people suffer from a diminished capacity for reading the language of facial expressions, which is why a high AQ score implies worse mind reading skills.) AQ can be seen as a subset of Daniel Goleman's concept of "emotional intelligence"; being smart is sometimes about doing complicated math in our heads, or making difficult logical decisions, but an equally important

measure of practical intelligence is our ability to assess—and respond appropriately—to other people’s emotional signals.

When you look at reality TV through the lens of AQ, the cognitive demands of the genre become much easier to appreciate. We had game shows to evaluate and reward our knowledge of trivia, and professional sports to reward our physical intelligence. Reality shows, in turn, challenge our emotional intelligence and our AQ. They are, in a sense, elaborately staged group psychology experiments, where at the end of the session the subjects get a million dollars and a week on the cover of *People* instead of a fifty-dollar stipend. The shows seem so fresh to today’s audience because they tap this crucial faculty of the mind in ways that ordinary dramas or comedies rarely do—borrowing the participatory format of the game show while simultaneously challenging our emotional IQ. *The Apprentice* may not be the smartest show in the history of television, but it nonetheless forces you to think while you watch it, to work through the social logic of the universe it creates on the screen. And compared with *The Price Is Right* or *Webster*, it’s an intellectual masterpiece.

Television turns out to be a brilliant medium for assessing other people’s emotional intelligence or AQ—a property that is too often ignored when critics evaluate the medium’s carrying capacity for thoughtful content. Part of this neglect stems from the age-old opposition between intelligence and emotion: intelligence is following a chess match or imparting a sophisticated rhetorical argument on a matter of

public policy; emotions are the province of soap operas. But countless studies have demonstrated the pivotal role that emotional intelligence plays in seemingly high-minded arenas: business, law, politics. Any profession that involves regular interaction with other people will place a high premium on mind reading and emotional IQ. Of all the media available to us today, television is uniquely suited for conveying the fine gradients of these social skills. A book will give you a better vista of an individual's life story, and a newspaper op-ed is a better format for a rigorous argument, but if you're trying to evaluate a given person's emotional IQ and you don't have the option of sitting down with them in person, the tight focus of television is your best bet. Reality programming has simply recognized that intrinsic strength and built a whole genre around it.

Politics, too, has gravitated toward the television medium's emotional fluency. This is often derided as a coarsening or sentimentalizing of the political discourse, turning the rational debate over different political agendas into a Jerry Springer confessional. The days of the Lincoln-Douglas debates have given way to "Boxers or briefs?" The late Neil Postman described this sorry trend as the show-businessification of politics in his influential 1985 book, *Amusing Ourselves to Death*. In Postman's view, television is a medium of cosmetics, of surfaces, an endless replay of the Nixon-Kennedy debates, where the guy with the best makeup always wins. "Although the Constitution

makes no mention of it, it would appear that fat people are now effectively excluded from running for high political office," he writes. "Probably bald people as well. Almost certainly those whose looks are not significantly enhanced by the cosmetician's art. Indeed, we may have reached the point where cosmetics has replaced ideology as the field of expertise over which a politician must have competent control."

No doubt some of what Postman says is true, though Bill Clinton did manage to eke out a successful political career while battling a minor weight problem. Television lets you see the physical characteristics of the people you're voting for with an accuracy unrivaled by any medium to date. To be sure, this means that physically repulsive individuals have suffered on election day. (Of course, it also means a commander in chief will no longer be able to conceal from the American people the simple fact that he can't *walk*.)

But the visibility of the medium extends beyond hairstyles and skin tone. When we see our politicians in the global living room of televised intimacy, we're able to detect more profound qualities in them: not just their grooming, but their emotional antennae—their ability to connect, outfox, condemn, or console. We see them as emotional mind readers, and there are few qualities in an individual more predictive of their ability to govern a country, because mind reading is so central to the art of persuasion. Presidents make formal appearances and sit for portraits and host

galas, but their day-to-day job is motivating and persuading other people to follow their lead. To motivate and persuade you have to have an innate radar for other people's mental states. For an ordinary voter, it's almost impossible to get a sense for a given candidate's emotional radar without seeing them in person, in an unscripted setting. You can't get a sense of a candidate's mind reading skills by watching them give a memorized stump speech, or seeing their thirty-second ads, or God knows reading their campaign blog posts. But what *does* give you that kind of information is the one-on-one television interview format—*Meet the Press* and *Charlie Rose*, of course, but probably more effectively, *Oprah*, because the format is more social and free-flowing.

So what we're getting out of the much-maligned Oprahization of politics is not boxers-or-briefs personal trivia—it's crucial information about the emotional IQ of a potential president, information we had almost no access to until television came along and gave us that tight focus. Reading the transcript of the Lincoln–Douglas debates certainly conveyed the agility of both men's minds, and the ideological differences that separated them. But I suspect they conveyed almost no information about how either man would run a cabinet meeting, or what kind of loyalty they would inspire in their followers, or how they would resolve an internal dispute. Thirty minutes on a talk show, on the other hand, might well convey all that information—

because our brains are so adept at picking up those emotional cues. Physically unappealing candidates may not fare as well in this environment. (Lyndon Johnson would have a tough time of it today.) But the candidates who do pass the appearance test are judged by a higher, more discriminating standard—not just the color of their skin, but the content of their character.

That's not to imply that all political debate should be reduced to talk-show banter; there's still plenty of room for position papers and formal speeches. But we shouldn't underestimate the information conveyed by the close-ups of the unscripted television appearance. That first Nixon–Kennedy debate has long been cited as the founding moment of the triumph of image over substance—among all those TV viewers who thought Nixon's sweating and five-o'clock shadow made him look shifty and untrustworthy. But what if we've had it wrong about that debate? What if it wasn't Nixon's lack of makeup that troubled the TV watchers? After all, Nixon did turn out to be shifty and untrustworthy in the end. Perhaps all those voters who thought he had won after they heard the debate on the radio or read the transcript in the papers simply didn't have access to the range of emotional information conveyed by television. Nixon lost on TV because he didn't *look* like someone you would want as president, and where emotional IQ is concerned, looks don't always deceive.

REALITY PROGRAMMING and Oprah heart-to-hearts may not be the most sophisticated offering on the televised menu, but neither are they the equivalent of junk food: a guilty pleasure with no redeeming cognitive nourishment. They engage the mind—and particularly the social mind—far more rigorously than the worst shows of past decades. People didn't gather at the water cooler to second-guess the losing strategy on last night's *Battle of the Network Stars*, but they'll spend weeks debating the tactical decisions and personality tics of the *Apprentice* contestants. Consider this one excerpt from an exchange on an unofficial *Apprentice* site:

KMJ179: A person who is a loose cannon panics quite easily and makes hasty decisions without knowing the facts or realizes what is at stake. Loose cannons do not listen to other people. Often times they will hear someone talking to them but they do not listen to what is being said. A loose cannon is someone who says one thing but turns around and does another thing on his or her own. I have dealt with loose cannons before and Troy is not a loose cannon by any means. Where Bernie got that from I do not know. It may have been Troy's accent that bothered the poor Bernie.

Ken NJ: I'm not defending Bernie, but merely providing my reasons so that you can see where I'm coming from in classifying Troy as a loose cannon. He was expected by Donald, his team mates and his TV audience to put in an honest days work for a honest days pay. Well, he didn't performed honestly and started the "hook or by crook" method with some false representations to clients in misleading them to bid by some undue influence. Any responsible executive seeing Troy's business tactics on-the-job would say this worker is a loose cannon because he can't conform to corporate policies and marches to his own tune. Even Bill who has observed own co-worker said he had serious questions about the way Troy goes about closing his deals.

KMJ179: I was surprised when Troy crossed the Ethical boundry and resorted to lying about the actual number of people interested in renting the place. He did not have to do that. Ireonicly when Troy was up front with the potential second client about having the first client also interested and sitting in another office, Troy lost out. The second client felt like he was beeing hussled. In a way I could not blame the second client though. We are talking about a high lease price for one day and you are telling me that I am competing with someone else for the highest price. I would tell Troy to go jump in the Hudson. Troy was very professional and let the client go after thanking him for the opportunity to meet.

Ken NJ: You just illustrated one incident of Troy's unacceptable method of doing business. I've seen used-car salesperson with more style and honesty than Troy. The other instance, I've posted about Troy pulling the Kwame autograph sales in Planet Hollywood curbside in misleading patrons. The Better Business Bureau and the State Consumer Agencies would be starting investigations on such pattern of business practices. I've seen aggressive sales people like Troy bankrupt profitable businesses overnight where the courts awarded treble damages in multimillion judgements. Troy is a live trip wire, just waiting to blow up the company. That's NOT an understatement in today's corporate governance.

It would probably take you a lifetime to read all the transcripts of comparable debates, both online and off, that follow in the wake of these shows. The spelling isn't perfect, and the grammar occasionally leaves something to be desired. But the level of cognitive engagement, the eagerness to evaluate the show through the lens of personal experience and wisdom, the tight focus on the contestants' motives and character flaws—all this is remarkable. It's impossible to imagine even the highbrow shows of yesteryear—much less *The Dukes of Hazard*—inspiring this quantity and quality

of analysis. (There are literally hundreds of pages of equivalent commentary at this one fan site alone.) The unique cocktail that the reality genre serves up—real people, evolving rule systems, and emotional intimacy—prods the mind into action. You don't zone out in front of shows like *The Apprentice*. You play along.

The content of the game you're playing, admittedly, suffers from a shallow premise and a highly artificial environment. (Plus the show forces you to contemplate Donald Trump's comb-over on a regular basis, occasionally wind-blown.) This is another way in which the reality shows borrow their techniques from the video games: the content is less interesting than the cognitive work the show elicits from your mind. It's the collateral learning that matters.

Part of that collateral learning comes from the sheer number of characters involved in a show like *The Apprentice* or *Survivor*. Just as *The Sopranos* challenges the mind to follow multiple threads, the reality shows demand that we track multiple *relationships*, since the action of these shows revolves around the shifting feuds and alliances between more than a dozen individuals. This, too, activates a component of our emotional IQ, sometimes called our social intelligence: our ability to monitor and recall many distinct vectors of interaction in the population around us, to remember that Peter hates Paul, but Paul likes Peter, and both of them get along with Mary. This faculty is part of our primate heritage; our closest relatives, the chimpanzees, live in societies

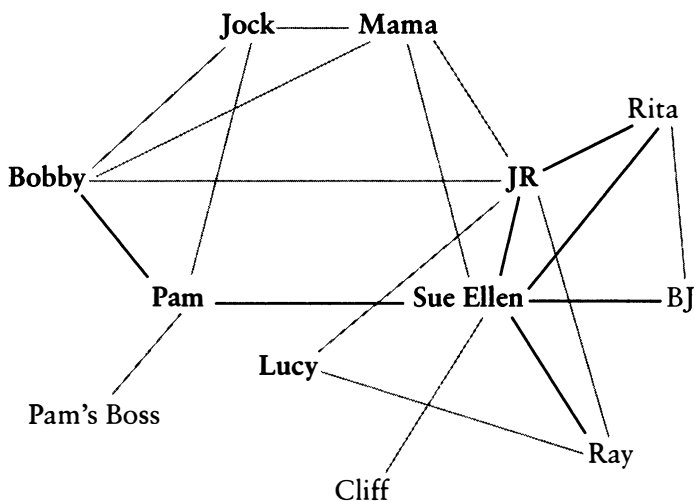
characterized by intricate political calculation between dozens of individuals. (Some anthropologists believe that the explosion in frontal lobe size experienced by *Homo sapiens* over the past million years was spurred by the need to assess densely interconnected social networks.) Environmental conditions can strengthen or weaken the brain's capacity for this kind of social mapping, just as it can for real-world mapping. A famous study by University College London found that London cabdrivers had, on average, larger regions in the brain dedicated to spatial memory than the ordinary Londoner. And veteran drivers had larger areas than their younger colleagues. This is the magic of the brain's plasticity: by executing a certain cognitive function again and again, you recruit more neurons to participate in the task. Social intelligence works the same way: spend more hours studying the intricacies of a social network, and your brain will grow more adept at tracking all those intersecting relationships.

Where media is concerned, this type of analysis is not adequately illustrated by narrative threads or a simple list of characters. It is better visualized as a network: a series of points connected by lines of affiliation. When we watch most reality shows, we are implicitly building these social network maps in our heads, a map not so much of plotlines as of attitudes: Nick has a thing for Amy, but Amy may just be using Nick; Bill and Kwame have a competitive friendship, and both think Amy is using Nick; no one trusts Omarosa,

except Kwame, but Troy *really* doesn't trust Omarosa. This may sound like high school, but like many forms of emotional intelligence, the ability to analyze and recall the full range of social relationships in a large group is just as reliable a predictor of professional success as your SAT scores or your college grades. Thanks to our biological and cultural heritage, we live in large bands of interacting humans, and people whose minds are skilled at visualizing all the relationships in those bands are likely to thrive, while those whose minds have difficulty keeping track are invariably handicapped. Reality shows force us to exercise that social muscle in ways that would have been unimaginable on past game shows, where the primary cognitive skill tested was the ability to correctly guess the price of a home appliance, or figure out the right time to buy a vowel.

The trend toward increased social network complexity is not the exclusive province of reality television; many popular television dramas today feature dense webs of relationships that require focus and scrutiny on the part of the viewer just to figure out what's happening on the screen. Traditionally, the most intricate social networks on television have come in the form of soap operas, with affairs and betrayals and tortured family dynamics. So let's take as a representative example an episode from season one of *Dallas*. The social network at the heart of *Dallas* is ultimately the Ewing family: two parents, three children, two spouses.

A few regular characters orbit at the periphery of this constellation: the farmhand Ray, the Ewing nemesis Cliff. Each episode introduces a handful of characters who play a one-time role in that week's plotline and then disappear from the network. In this episode, "Black Market Baby," the primary structure of the narrative is a double plot: the competition between the two brothers to have a baby and give the family patriarch a long-overdue grandchild. Imagined purely in narrative terms—along the lines of our *Sopranos* and *Hill Street*—this would be a relatively simple structure: two plotlines bouncing back and forth, overlapping at a handful of key moments. But viewed as a social network, it is a more nuanced affair:



The lighter lines represent a social relationship that you must grasp to make sense of the episode's plot: you need to understand that the patriarch Jock doesn't approve of Pam's decision to go into the workforce and delay having a baby, just as you need to understand the longstanding rivalry between Bobby and JR in several crucial scenes with the entire family. The darker lines represent social relationships that trigger primary narrative events: when JR intervenes to pay the surrogate mother Rita to leave the state, thereby squelching Sue Ellen's adoption plan, or when Sue Ellen has a drunken night of passion with Ray.

Most of us don't think of these social networks in explicitly spatial terms while we watch TV, of course, but we do build working models of the social universe as we watch. The visualizations help convey in a glance how complex the universe is. And a glance is all you need to see—in the chart on page 112, of a season-one episode of the FOX series *24*—that something profound has happened to the social complexity of the TV drama in the past thirty years.

Season one of *24* is ultimately a narrative web strung between four distinct families: the hero Jack Bauer and his wife and daughter; the family of the threatened senator, David Palmer; the family of the Serbian terrorist Victor Drazen; and the informal family of coworkers at the Central Terrorism Unit, where Bauer works. (This last functions as a family not just because they live in close quarters together, but also because the office dynamics include two

characters; the number of distinct groups; the connections between characters, and between groups; the number of relationships that are central to the episode's narrative. The social world of *Dallas* is that of an extended family: the primary players are direct relatives of one another, and the remaining characters have marginal roles. *24*, on the other hand, is closer to the scale of a small village, with four rival clans and dozens of links connecting them. Indeed, the social network of *24* mirrors the social network you frequently encounter in the small-town or estate novels of Jane Austen or George Eliot. The dialogue and description are more nuanced in those classic works, of course, but in terms of the social relationships you need to follow to make sense of the narrative, *24* holds its own.

Watch these two episodes of *Dallas* and *24* side by side and the difference is unavoidable. The social network of *Dallas* is perfectly readable within the frame of the episode itself, even if you haven't seen the show before and know nothing of its characters. The show's creators embed flashing arrows throughout the opening sequence—an extended birthday party for the family patriarch, Jock—that laboriously outline the primary relationships and tensions within the family. Keeping track of the events that follow requires almost no thought: the scenes are slow enough, and the narrative crutches obvious enough, that the modern television fan is likely to find the storylines sluggish and obvious. Watch *24* as an isolated episode and you'll be utterly baffled

by the events, because they draw on such a complex web of relationships, almost all of which have been defined in previous installments of the series. Appropriately enough for a narrative presented in real time, *24* doesn't waste precious seconds explaining the back story; if you don't remember that Nina and Tony are having an affair, or that Jack and David collaborated on an assassination attempt against Drazen, then you'll have a hard time keeping up. The show doesn't cater to the uninitiated. But even if you *have* been following the season closely, you'll still find yourself straining to keep track of the plot, precisely because so many relationships are at play.

The map of *24*'s social network actually understates the cognitive work involved in parsing the show. As a conspiracy narrative—and one that features several prominent “moles”—each episode invariably suggests what we might call phantom relationships between characters, a social connection that is deliberately not shown onscreen, but that viewers inevitably ponder in their own minds. In this episode of *24*, Jack Bauer's wife, Teri, suffers from temporary amnesia and spends some time under the care of a new character, Dr. Parslow, about which the viewer knows nothing. The show offers no direct connection to the archvillain, Victor Drazen, but in watching Parslow comfort Teri, you compulsively look for clues that might connect him to Drazen. (The same kind of scrutiny follows all the characters at

CTU, because of the mole plot.) In 24, following the plot is not merely keeping track of all the dots that the show connects for you; the allure of the show also lies in weighing *potential* connections even if they haven't been deliberately mapped onscreen. Needless to say, *Dallas* marks all its social relationships with indelible ink; the shock of the "Who shot JR?" season finale lay precisely in the fact that a social connection—between JR and his would-be assassin—was for once *not* explicitly spelled out by the show.

Once again, the long-term trend of the Sleeper Curve is clear: one of the most complex social networks on popular television in the seventies looks practically infantile next to the social networks of today's hit dramas. The modern viewer who watches *Dallas* on DVD will be bored by the content—not just because the show is less salacious than today's soap operas (which it is by a small margin) but because the show contains far less *information* in each scene. With *Dallas*, you don't have to think to make sense of what's going on, and not having to think is boring. 24 takes the opposite approach, layering each scene with a thick network of affiliations. You have to focus to follow the plot, and in focusing you're exercising the part of your brain that maps social networks. The content of the show may be about revenge killings and terrorist attacks, but the collateral learning involves something altogether different, and more nourishing. It's about relationships.