

Video Review

\$1.95

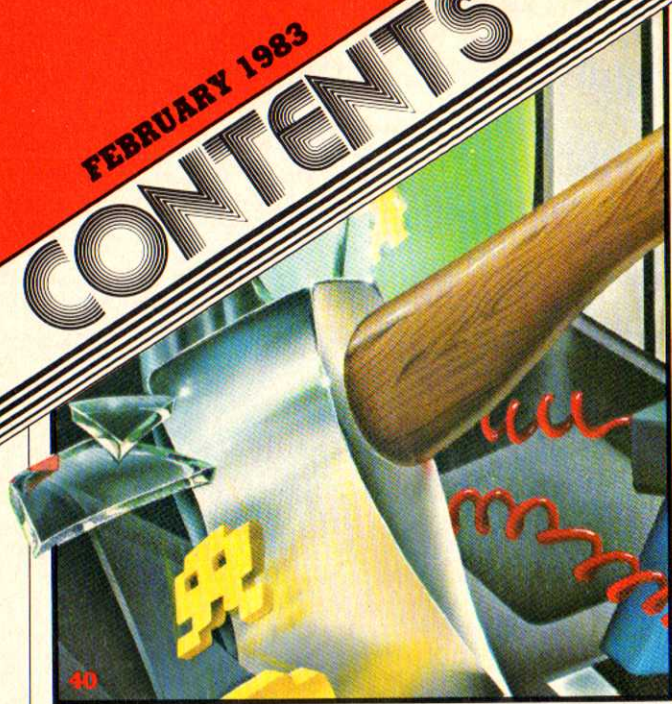
THE WORLD AUTHORITY ON CONSUMER VIDEO

STEALING PAY TV

THE INS, THE OUTS—AND THE LAW!**Budget Add-Ons for
Better Gaming****How Safe Are
Home Satellite
Dishes?****CBS Labs Test
JVC's Mini VHS****How to Tape
Horror
Home Movies**
By John Carpenter**SPECIAL:**
Reviews of
ZAXXON, SMURF
Videogames
REDS, TRON
On Tape!

FEBRUARY 1983

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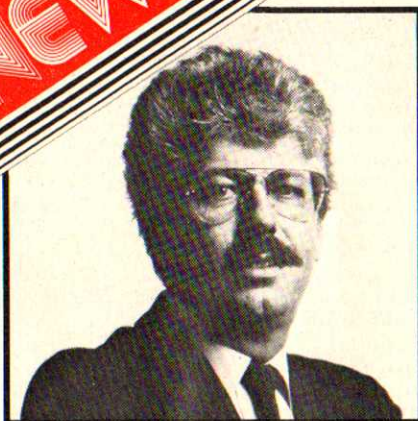
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Top-secret Atari and other flashes



■ **RECORDING CED:** In exhibition full of surprises, showstopper at recent Toshiba Technology fair in Tokyo was display of CED disc-recording system. Disc stores electrical charges transmitted by needle; can be erased and used for rerecording. Other breakthrough products at show: palm-size videocamera weighing less than one pound; VCR using vertical magnetic recording for potential recording time twice that of conventional VCRs; PCM satellite broadcast sound decoder to enable reception of digital sound from satellite broadcast.

■ **...AND RECEDING CED:** Toshiba's CED recording technology may be coming none too late for survival of format. Sanyo has joined Radio Shack and Zenith in temporarily pulling plug on CED. Company said it would come back with CED once prices stabilize and when number of programs grows to warrant it. Despite withdrawals, however, RCA remains in something of catbird seat. Unlike

others, it also has disc arm, and while low prices may make player end all but profitless, disc sales are strong—and most of them are selling at undiscounted prices.

■ **VANISHING VHD:** Some US licensees still insist VHD videodisc system is go, but prospects for third disc format appear increasingly unlikely. Latest developments: Shutdown of all US VHD programming and equipment operations; European licensee Thorn EMI taking \$32 million writedown of VHD costs. Though recession's clearly playing part in VHD dilemma, it's by no means lone culprit. When VHD was in planning stages, there appeared to be window between \$499 RCA CED price and \$700 to \$750 LaserVision range. Since then, however, both CED and LV player prices have deteriorated, closing window.

■ **SANYO DOWNSIZING:** Race to put TV set in everyone's pocket intensifies, with Sanyo latest to take wraps off mini black-and-white set. Tiny set (roughly 1¼x3x8½ inches) will come in two versions when it hits Japanese stores next summer—one with three-inch, other with four-inch screen. Set uses LCD (liquid crystal display) for screen, which has 19,200 separate imaging elements. Though company officials decline specifics, new TV set is expected to cost about \$400.

■ **TEST-TUBE BABIES:** Get ready for radically new look in video monitors and color TV sets. First prototypes for new 14-, 20- and 26-inch tubes are now rolling off Japanese assembly lines, and they'll probably show up on monitors and TV sets sold in US by summer. Tubes have much flatter screen surface and are closer to perfect rectangle than conventional tubes. Result? Sleeker cabinet design.

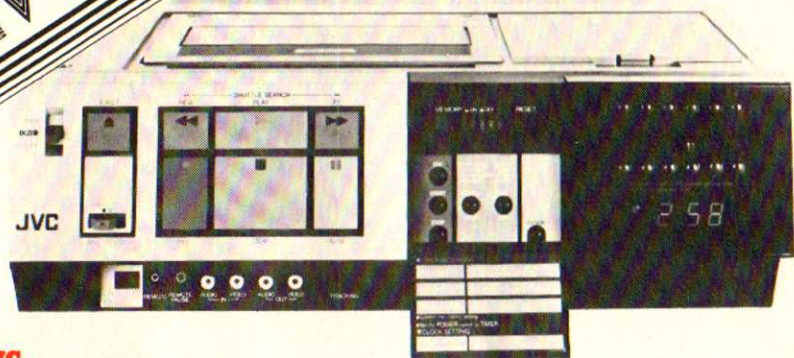
■ **E.T., PHONE HOTEL:** Next time you check into hotel or motel, desk clerk may offer you videogame to go along with room. Universal Concepts is launching hotel/motel rental scheme using ColecoVision consoles and games. Company executive says it has already signed 150 to 200 deals with independent hotels and will be exclusive agent for Best Western chain. Meanwhile, swing into computer games continues. Tronix Publishing now selling three Commodore VIC-20 games (*Swarm*, *Sidewinder*, *Galactic Blitz*) and one for Atari 800 (*Kid Grid*). Games cost from \$24.95 to \$29.95.

■ **FINAL FRONTIER?** Is rash of low-priced prerecorded cassettes from major movie studios on way? Could be, if initial sales of Paramount's \$39.95 *Star Trek: The Wrath of Khan* are any guide. At presstime, video stores around country were selling tape like crazy. (Philadelphia store sold 760 in first week.) Indications are strong next under-\$40 will be fall hit *An Officer and a Gentleman*. Others seem certain to follow.

■ **FALCON CREST:** What's it all about, Atari? Top-secret project code-named Project Falcon is now underway in West Coast Atari facility. Headed by former Polaroid executive, Falcon project is shrouded in mystery, but inside source says product involved—which *isn't* videogame—may be unveiled this spring. Stay tuned.

**THE LATEST IN
NEW PRODUCTS**

Toshiba's Beta Hi-Fi VCR and more



**JVC
Videocassette Recorder
Model HR7100U \$699**

You can take a lengthy break without breaking your tape with this VHS-format VCR's automatic release mechanism—a feature found only in top-of-the-line VCRs. The mechanism will release the pause mode on the recorder after five minutes, preventing undue wear on the cassette.

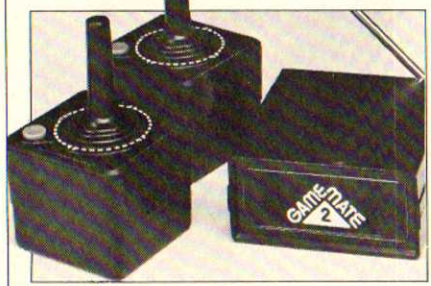
This front-loading, four-head VCR comes with shuttle search, auto-rewind and has a nine-function, wireless remote control. It also has a 12-channel tuner and 10-day/one-event programmability.

This tabletop VCR weighs 21.2 pounds.
JVC, 41 Slater Dr., Elmwood Park, NJ 07407 (201) 794-3900

**ZIMAG
Blank Videotapes
T-120; L-500**

Here is a new brand of blank videotape to choose from for both Beta and VHS formats. These ferric-oxide-formulation tapes are designed to cut down on drop-outs and improve video signal response.

Magnetic Tape, Inc., 14600 South Broadway, Gardena, CA 90248 (213) 217-0077



**CYNEK
Videogame Remote Control
Game Mate 2 \$99.95**

Now you're able to jiggle your joystick without having to wrestle with wires. The remote control joysticks work up to 20 feet away from a receiver that plugs into your console. They're compatible with the Atari and Sears consoles and Commodore computers.

Cynex Manufacturing Corp., 28 Sager Place, Hillside, NJ 07205 (201) 399-3334

**SHOWTIME VIDEO VENTURES
Videocamera Color Processor
Model VV-77P**

It's possible to make blue skies bluer and generally brighten up your tapes, according to Showtime Video Ventures, with this first color processor for home videocameras.

The eight-ounce processor connects between your camera and your VCR. It allows you to improve and

correct the color signal and light levels from your camera at the time you're taping.
Showtime Video Ventures, 2715 5th St., Tillamook, OR 97141 (800) 547-8821



**SONY
Portable Videocassette Recorder
Model SL-2001
Tuner/Timer
Model TT-2001**

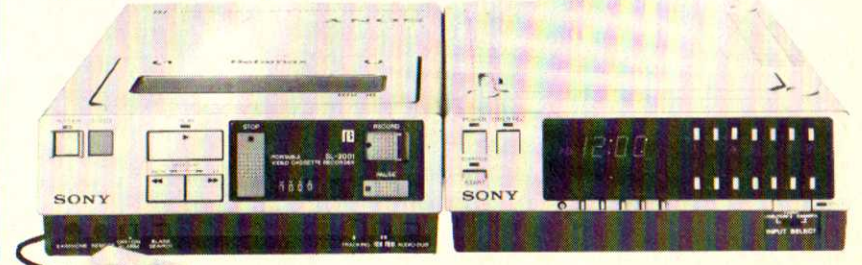
At only nine pounds, 14 ounces, this portable recorder is the lightest yet available in the Beta format.

The recorder comes with scan,

pause and a blank-search feature that seeks out unused portions of the tape. It has a wired remote.

The separate tuner/timer weighs 10 pounds, three ounces and can be programmed to record one event over 24 hours.

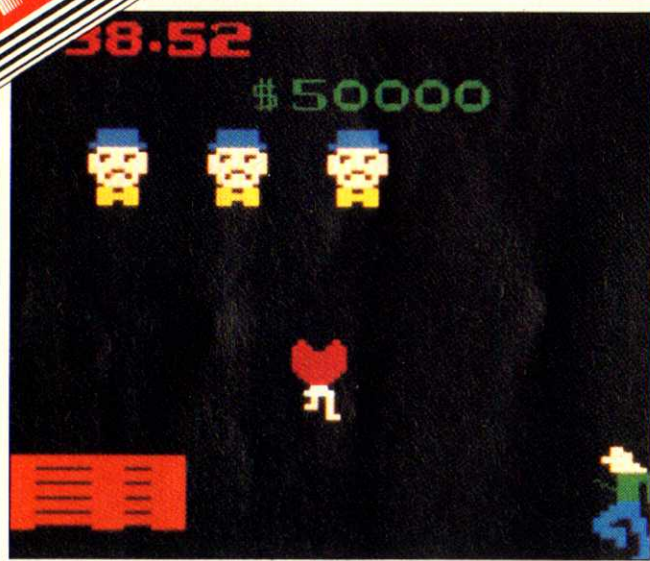
Sony, 9 W. 57th St., New York, NY 10019 (212) 371-5800



Unless otherwise noted, all New Products specifications are manufacturers' data—not results of Video Review tests or measurements. All listed prices are manufacturers' suggested retail. Availability of products varies according to supply and locality.

GLITCHES, FLICKERS AND
FREEZE-FRAMES

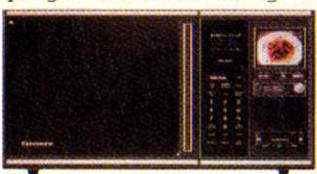
Rock 'n' roll and TV sets that cook



TV Dinners

In what must be the first example of the melding of two exciting worlds—video and food preparation—Sears has introduced a microwave oven/TV set/audiocassette recorder combination at its larger stores for a mere \$1,500. How it got past our New Products section we'll never know.

The new mini-combo (or maybe micro-combo) has a color TV set with a five-inch screen, a front-loading, stereo audiocassette recorder and programmable defrosting. It



also has video- and audio-input/output jacks for connecting a VCR or a disc player. For watching Julia Child tapes, no doubt.

Chester Gould, the comic-strip writer-artist who created *Dick Tracy*, envisioned something like this once, along with

wrist TV sets and those weird buckets for flying around the moon colony in Tracy's post-Sputnik days. We've already got the wrist TV, sort of, in an upcoming Seiko product. Maybe bucket transportation is next. (F.L.)□

Rock Around The TV Set

With teens trading in their concert tickets for arcade tokens and their turntables for videogame consoles, the music biz needs every break it can get. Ergo *Escape*, the first videogame based on a rock 'n' roll album.

A game spin-off of the identically titled album by FM rockers Journey, the *Escape* game (from Data Age) has the player try to get five band members from a concert stage to a waiting space-limo, while avoiding groupies, promoters, photographers and police barricades. Data Age says more rock videogames will be on the way if *Escape* runs wild.

Now this opens up a whole bunch of music-game possi-

bilities. How about reggae videogames, cabaret videogames, disco or even post-punk videogames. Or even game-song combos such as "Stand by Your Pac-Man," "Everybody Is a Star Raider," "It's Hard to Be a Communist Mutant in the City" or "Everybody's Got Something to Hide Except for Me and My Preppie"? (F.L.)□

3D X

Gather 'round, lads, gather 'round. I've a strange and wondrous tale to tell, of a mystical kingdom, an enchanted maiden, and the fearsome mask known only as... Sexcalibur.

That mask is the MacGuffin of what Select/Essex Video, a leading adult-movie producer, calls the first 3D X-rated movie on videocassette. Shot specifically for video, *Sexcalibur* recounts the fate of a woman (*Deep Throat* alumna Maria Tortuga) who sees visions of a former life, and who acquires the fabled mask Sexcalibur, which gives her the power to inject friends and enemies alike with lust. According to Select/Essex, the movie's 3D effects alone cost \$60,000.

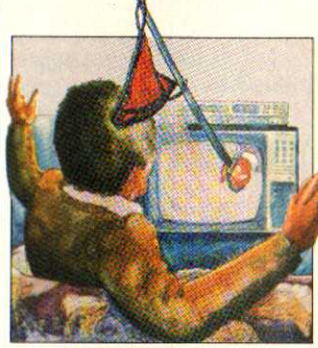
Does this make it a serious tale of swords and sorcery?

Nope. "There's wall-to-wall sex," assures Jeff Steinman, president of the Essex arm. "There's no heavy story line as in *Roommates*."

The movie does have more than anatomical parts bouncing out of the screen, though. Among 15 scenes accentuating 3D (the whole movie was shot in that process, according to Steinman), there are some with gauntlets, swords

and fireballs coming out at the audience.

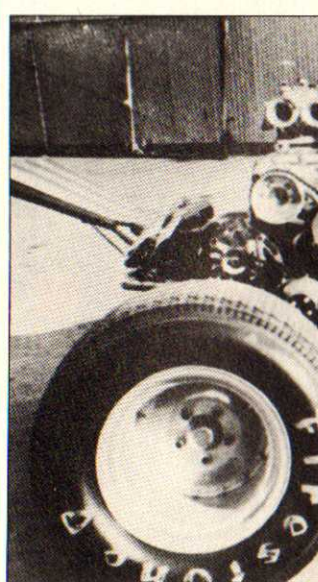
A pair of 3D glasses are included in the package, of course. I can't imagine lying in bed with them on, but, as Steinman says, "You'll want to show *Sexcalibur* to your friends. It's a great tape for parties." If you have a few dozen extra pairs of glasses. (F.L.)□



Dishes and Dudley Do-Right

You could call it the Video Ice Charades.

Some time ago, Canada's Federal Business Development Bank granted a small business loan to Crowder





Communications, an up-and-coming electronics company in Burnaby, British Columbia. The company put the loan to such good advantage that during Canada's Small Business Week recently, the FBDB gave it a management award. Only then did the bureaucrats in Ottawa discover that as fast as Crowder Communications was turning government cash into satellite TV receiving systems, the Royal Canadian Mounted Police was riding off into the sunset to seize them from homes as far north as the eskimos' Arctic Circle.

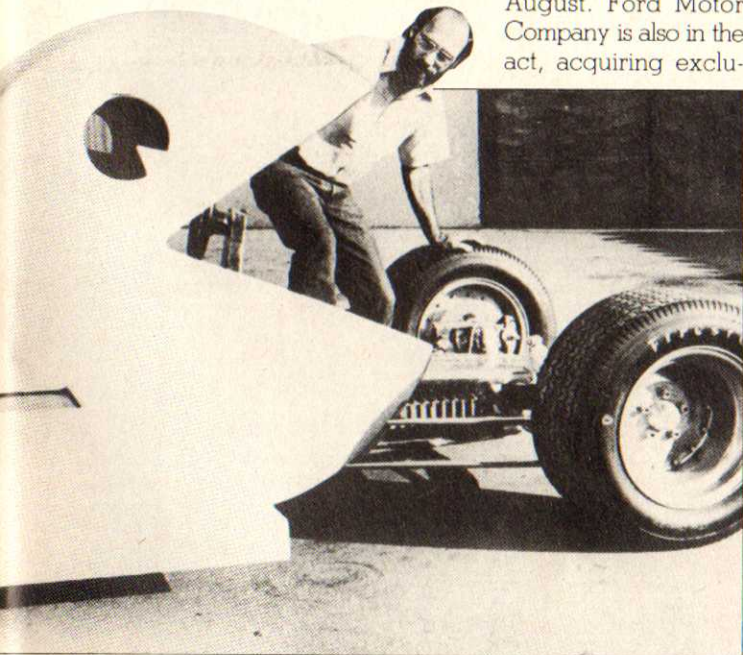
Part of the problem has been Canadian law and the policy of the Department of Communications toward private ownership of satellite antennas, which has been, to put it mildly, ambivalent. The Mounties had strong suspi-

cions that miners, loggers and eskimos were using their Crowder antennas to sneak a peek at ESPN and MTV (Canadian reception of US signals is illegal), so they actually seized several offending dishes—just when the FBDB happened to come along with its award. (R.A.)□

Detroit Gets Hip

Here's a sneak peek at Chrysler's latest—*The Pac-Wagon*, the first in a series of new cars licensed from hit videogames. *Ms. Pac-Wagon* will follow, for the woman of the house.

"Who's going to want a Datsun when there's our new *Donkey K-car*?" asked Chrysler president Lee Iacocca at a recent fictitious press conference. The company also plans to introduce its sleek *Defender* at the Auto Show in August. Ford Motor Company is also in the act, acquiring exclu-



sive rights to *Zaxxon* to replace the old Mustang line. Rumor has it that the Volkswagen *Frogger* is already on the drawing boards.

The new, innovative videogame cars draw heavily on their inspiration. As Iacocca said, "We believe this is the first fuel-injected, eight-cylinder vehicle that is Atari-compatible." There will be no rebates from Chrysler on these cars. However, if you reach 15,000 miles without crashing, you are awarded a free bonus car. For further incentive to buy, any owner that racks up 100,000 miles on one car is permitted to

and other bestsellers, will be bringing her work to cassette, courtesy of Lorimar Productions.

According to a New York *Daily News* report, Hite says the program will be too graphic for regular television, even though "there won't be any dramatization of the material."

What we'll see on the screen instead will be "people speaking directly to the viewer, relaying the information in a one-to-one form."

Personally, we're holding out for the one-on-one form. Or perhaps the interactive disc version. (D.C.)□



punch his or her initials into the odometer's "All-Time Immortal" list. A further innovation is the replacement of the traditional steering wheel with a rack-and-pinion joystick.

If anything can pull the US auto makers out of their mess, videogames can. But we hear ominous news from Japan. They say in a few years videogame cars will be dead—when the Datsun *TRS-80Z* computer car arrives.

(On the other hand, maybe that Pac car is really a photo of Salinas, California's Rod Powell and the \$75,000 car he welded out of truck fenders and Volkswagen roofs.) (Dan Gutman)□

New Video Hites

Videocassettes will be reaching new Hites later this year.

Shere Hite, author of *The Hite Report*, *Male Sexuality*

PACyderms

A pair of elephants were playing *Pac-Man*. The site was San Antonio, Texas, where trained pacyderms were visiting the Alamo KOA Campgrounds and the sun was obviously beating down a little too much that day.

Now, how does a two-ton elephant play *Pac-Man*? Anyway she wants to. *Why* would an elephant play *Pac-Man*? To win the prize. Of course. So, with her trunk firmly wrapped around a joystick and the blood of the mastodons coursing through her veins, Dumbo the elephant beat Jumbo the elephant and received a "six-pac to go": 25 pounds of popcorn laced with peanuts and candy. To the runner-up went a dozen bananas, probably left over from a *Donkey Kong* match. (F.L.)□

INVASION OF THE VIDEOGAME ACCESSORIES

If the opposite of luxury is mediocrity, as Oscar Wilde supposed, customizing a home videogame console with some of the exotic accessories invading the games scene is a virtual necessity. After all, what videogame player wants to be mediocre?

Choosing just what add-ons will best improve your score or be most helpful in making videogames more pleasant to play may not be easy, however. As in any new and fast-growing field, there are some prize products—as well as some flimsy plastic junk—out there, and a lot of it looks the same.

The most popular way of customizing videogame consoles used to be to replace the joysticks, simply because the ones that come with most consoles are anything but a joy. Since joysticks and other types of controllers, such as discs, paddles and fire buttons, are integral to on-screen action, such failings as lack of durability and poor

response time can directly affect videogame play.

With some joysticks, there are less obvious problems as well. For instance, left-handed players often find themselves slighted by fire buttons designed for righties. Also, lots of people, whether right- or left-handed, find disc controllers too uncomfortable to use for extended periods of time.

To solve the most typical joystick problems—flimsiness and poor response time, an army of replacement joysticks and other accessories have emerged, offering the potential of racking up higher scores. You can find, for example, rugged replacement controllers promising tighter response times than those possible with standard controllers. You can find lefty controllers and even adapters to change disc controllers into joysticks. You can find extension cords, carrying cases, voice-synthesis modules and compatibility kits. With a little careful shop-

Photo: Michael Waine





Another way of improving your grip on a game is to improve your grip on the joystick. One of the first things that arcade gamers playing home videogames notice is that the typical home joystick is usually missing the arcade type's large, ball-like grip on the end. With your whole hand—not just a couple of fingers—tight on such a ball-grip, you can keep a good handle on your game. Such grips, though, were originally designed to go with metal, arcade-joystick stems that can take pressure mere plastic often cannot.

Passing the Ball

Even so, ball-grip joysticks have now come to the home and are proving to be one of the most popular videogame accessories, at least judging from the number of companies offering them. G.A.M.E.S. (Super Joystick, \$29.95), Pusher (The Grabber, \$4), longtime accessory maker Recoton (Arcade Sphere, \$5.99 a pair) and Suncom (Slik Stik, \$9.95) are some of the companies making ball-grip joysticks of different strengths and degrees of responsiveness.

It's probably this design that led to the creation of the newest accessory. Wico and others even offer

Asteroids) in which full mobility is almost a necessity.

But what can you do if you prefer a joystick and find yourself with the flat disc controller that comes with the Mattel Intellivision and the Emerson Arcadia-2001 consoles? There are adaptors, the most famous of which could be Video Product Sales' In-Joy-A-Stick (\$10.95). Jenco and others make such adaptors as well.

Still, for all their effect on playability, such replacement joysticks are little more than enhancements. Some sophisticated specialty controllers, though, not only have begun to demonstrate the importance of customization but have, at the same time, begun to democratize videogame play.

Flying Southpaw

Say you're left-handed. You'd notice awfully quickly that firing buttons are usually on the top, left corner of most controllers, so that righties can maneuver the joysticks with their right hands and hit the firing buttons with their left thumbs. As with a lot of life's little gadgets, the standard home videogame joysticks just aren't meant for left-handed people (although joysticks with fire buttons directly on top of them can usually be played by

GAME ACCESSORIES: WHO MAKES THEM

BC BLASTER (spherical controllers), BC Systems, 59 W. Wyoming Ave., Melrose, MA 02176

COMMAND CONTROL (joysticks, adaptor) Wico, 6400 W. Gross Point Rd., Niles, IL 60648

THE CONTROLLER (joystick), Jenco Home Entertainment, 3975 Amboy Rd., Staten Island, NY 10308

FIRE POWER I (joystick), Gammation, PO Box 1028, Fairborn, OH 45324

THE GAME KEEPER I, II, III (storage cabinet), Dynasound, 205 Broadway, Cambridge, MA 02139

GAME MATE 2 (joystick), Cynex Manufacturing, 28 Sager Place, Hillside, NJ 07205

IN-JOY-A-STICK (joystick), Laskey Video Distributing, 20 Mourning Dove, Irvine, CA 92714

JOYLINK, CONTROL LINK, CABLE CONCEPTS TV/GAME SWITCH (extension cables, TV/game switch) Cable Concepts, PO Box 427, Fraser, MI 48026

KY ENTERPRISES FINGERTIP CONTROLLER, KY ENTERPRISES CUSTOM CONTROLLERS FOR THE HANDICAPPED (joystick, mouth-operated controller for handicapped users), KY Enterprises, 3039 E. Second St., Long Beach, CA 90803

LE-BO/PEERLESS VIDEO GAME CARTRIDGE ORGANIZER, LE-BO/PEERLESS ATARI GAME CONSOLE ORGANIZER AND CARRYING CASE (cartridge case, console case, carrying case), Le-Bo/Peerless, 60 West St., Bloomfield, NJ 07003

LE STICK (joystick), Datasoft, 9421 Winnetka Ave., Chatsworth, CA 91311

POINTMASTER COMPETITION JOYSTICK (joystick), Discwasher, 1407 N. Providence Rd., PO Box 6021, Columbia, MO 65205

THE PUSHER GAME LIBRARY, VIDEOGAME CARTRIDGE STORAGE CABINET, GRABBER THE STICKLER (storage units, spherical controllers, controllers), Pusher Sales, Inc., P.O. Box 6588, Woodland Hills, CA 91365

QUESTAR (controllers, extension cables, game switches, color converters, joysticks), Quest Industries Inc., 670 NW Penn Ave., Chehalis, WA 98532

RECOTON VIDEO GAME ACCESSORIES (dust cover, TV/game switch, Atari adaptor, joystick extension cable, joystick replacement cable, spherical controllers), Recoton Corp., 46-23 Crane St., Long Island City, NY 11101

SAVOY CARTRIDGE CARRYING CASE, SAVOY HOME STORAGE UNIT (cartridge carrying case, cartridge storage cabinet), Savoy Leather Manufacturing Corp., 260 Neck Rd., Haverhill, MA 01830

SKIL STIK (joystick), C&T Creations, 127 Weybosset St., Providence, RI 02903

STAR FIGHTER, SLIK STIK, LEFTY, JOYEX, GAMESWITCH (joysticks, left-hand adaptor, controller extension cable, game/TV selector), Suncom Inc., 650E Anthony Trail, Northbrook, IL 60062

SUPER JOYSTICK, E-Z JOYSTICK (joystick), G.A.M.E.S., 6626 Valjean Ave., Van Nuys, CA 91406

"track-ball" controllers, spherical devices the likes of which were first popularized in arcade video football games. Players can roll the exposed top half of the track-ball sphere to give their screen characters 360° mobility. Though arcade video football faded, track balls have resurged lately thanks to the arcade game *Centipede*. Soon, they could become just as popular with home videogames (such as adapted *Centipede* and

either left- or right-handed people—and even ambidextrous ones). Fortunately, a number of companies have begun making left-handed controllers, such as Quest Industries' Questar II (\$39.95), KY Enterprises' Fingertip Controller (\$19.95) and Suncom's Lefty Joystick Adaptor (\$9.95). One way arcade games get around this problem is to have twin left and right banks of buttons; BC Systems adapted this idea with its Blaster (\$29.95).

Perhaps the most forward-looking idea in game accessories, though, is one which took years to arrive in VCRs: wireless remote control. Cynex's Game Mate 2 (\$99.95 a pair) is the first wireless videogame controller, and, while roughly a hundred bucks may be a lot to spend for a pair of joysticks, this is still a stunning bit of technology for first-on-the-blockers.

Getting rid of cluttering wires is one helpful thing you can do to keep your home media center efficient. Another is to store videogame components and games in storage cabinets, carts and carrying cases. Video-accessory makers such as Le-Bo/Peerless (Videogame Cartridge Organizer, \$7.49 and Game Console Organizer/Carrying Case, \$37.50) and Dyna Sound (Game Keeper and larger models II and III, \$6.99 to \$29.99) and game manufacturers Atari, Imagic, Odyssey and Sears, among others, make protective cabinets. Echoing the world of audio/video-equipment care, Recoton, Sears and other companies have videogame-console dust covers.

Piece-Full Co-Existence

Proper console care may be more important than you'd at first think. Although both sophisticated, high-resolution game systems and cheap, basic systems will probably continue to co-exist in our homes the way both component-TV monitors and black-and-white portables do, more and more home videogame consoles will eventually serve as the foundations for home computers. Then protecting your investment begins to make a lot more sense. When add-on modules for expanded

memory, for compatibility with other systems' games and for use with floppy discs become more pervasive than they are already, your lowly videogame console may become integral to your household.

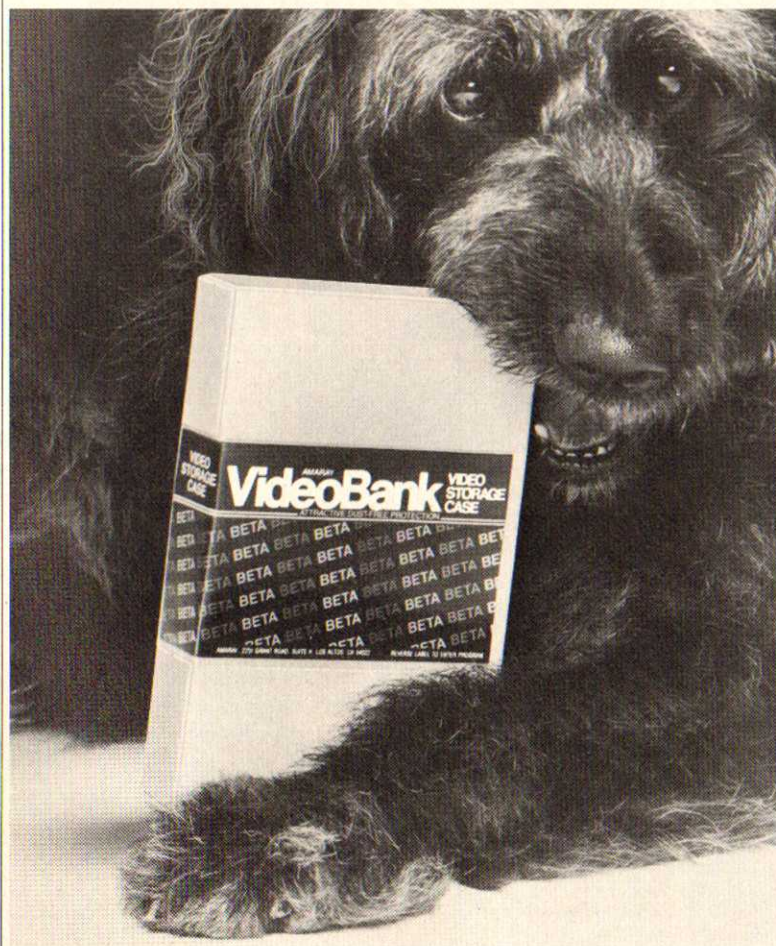
Compatibility

In a practical sense, the most significant of these accessories may be the compatibility module. Starpath (formerly Arcadia) has its Supercharger, for example. This is a module which plugs into the Atari VCS to allow you to play Starpath games encoded on inexpensive cassettes. Coleco's Atari Conversion Module (about \$55) snaps onto the ColecoVision mainframe (that is, the console) to allow the playing of any game cartridge made for the Atari VCS. The new Ultravision stand-alone is designed to accept Atari VCS games also. And the upcoming Odyssey³ from Odyssey will be two-way compatible with the current Odyssey²—games made for one will play on the other.

As far as computer expandability goes, Coleco claims it'll have its Home Computer Module (about \$175) out by mid year. Intellivision may unveil its long-awaited keyboard (for typing in computer-language instructions) about the same time and at about the same price or a little less. Some makers of hybrid, computer-expandable game consoles, such as Commodore with its upcoming Max Machine, plan to have whole lines of computer peripherals for their basic consoles.

The invasion of videogame add-ons, it's clear, means more than joysticks to the world. □

—Pat Cassidy



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AWFUL FACTS OR A LOT OF LIES?



© Jane Bealder

By Barry Jacobs

"Everything is eliminate, kill, destroy," said Surgeon General C. Everett Koop. "There's nothing constructive in [video] games." In a surprising declaration involving more than 12 million American videogame fans, the highest ranking medical officer in America warned that the country's kids have become addicted "body and soul" to videogames, and that this was resulting in "aberrations of childhood behavior." Within 24 hours, the story made newspaper headlines across the country, prompting a furious reaction.

"An uncalled-for witch hunt," said the National Coin Machine Institute in a telegram to President Reagan.

"Utterly without foundation," said a spokesperson for the Electronics Industry Association.

Forced to rapidly back-pedal, Koop issued a statement to the press that his comments the previous day were "not based on any scientific evidence" and that

"nothing in my remarks should be interpreted as implying that videogames *per se* are violent in nature or harmful to children."

While videogame makers were able to beat down the Surgeon General in the incident, the issues he raised are just beginning to press on the public's mind. The question of what effects—positive and negative—home videogames have on children and adults has begun to challenge America's psychologists, educators and parents. Do the violent themes of some games negatively influence kids? Can operation of the games serve as an introduction to the use of computers? Is the big attack on videogames founded on hard facts, on speculation or on lies?

Experts hold a wide variety of pro and con opinions on videogames, largely owing to the scanty amount of empirical research available to date. "The technology is far ahead of our examination of it," says one researcher, adding, "If videogames were a new drug, they would still be under investigation by the FDA."

The Mind's Ayes—and Nays

It was the psychological impact of home videogames that most disturbed Koop, a Philadelphia pediatric surgeon who became Surgeon General in January, '82. At a conference on family violence at the University of Pittsburgh's Western Psychiatric Institute, he outlined

two areas of concern involving videogames: the antisocial behavior he claimed the violent themes of most videogames encourage, and the isolation he said the games impose on youngsters who play them for hours. Koop suggested that some children who play videogames (as with some children who watch violence on TV) may be only too ready to accept real violence. As for the social isolation caused by the games, Koop cited "tensions" and "sleeplessness" as some of its symptoms.

How valid are his claims? Experts' opinions are mixed. Among Koop's

most ardent supporters on the violence question is the National Coalition on Television Violence (NCTV), which takes as dim a view of videogame shoot-em-ups as it does of TV cop shows. According to Dr. Thomas Radecki, the organization's chairperson and a psychiatrist with the Southern Illinois University School of Medicine, "the violence in videogames is especially harmful to children because of the long hours they play the games and the degree of role-playing involved."

Dollhouses Collapsing

The problem is likely to worsen, he argues, because home videogames are becoming increasingly violent, and, he says, they are displacing traditional, more wholesome kinds of games. "Our surveys show that over 65% of home videogames now available incorporate violent themes," Radecki claims. "Toy-industry data have recently shown that, because of the popularity of violent videogames, the sales of dollhouses are down 22%, board games are down 17%, and toy trains are down by 9% over the past year."

While the Surgeon General has thus far only stated his opposition to videogame violence, the NCTV has pressed for action. The organization has petitioned the Federal Trade Commission to ban all advertising for violent videogames and to sponsor counter-advertising (like the anti-smoking ads) to inform the public of the harmful effects of these games. So far, the FTC has declined to consider the issue, though NCTV lobbyists plan to continue pressuring the agency. "It's important that we prevent the continued production of violent videogames," says Radecki. "Instead of spending millions of dollars each year to develop new ones, we should be using that money to research the effects to-day's games are having on children now."

Social or Desocializing?

Although less vehement in his opposition to violent videogames, Dr. William Nichols, president of the American Association of Marriage and Family Therapy, agrees with the Surgeon General's view. Playing videogames with violent themes, he says, "is a form of socialization training in which one learns to be violent without any negative consequences."

Sharing those fears is Dr. Neil Malamuth, an associate professor of communications at UCLA and a well-known researcher on media violence. "My biggest concern is not that some videogame players will commit crimes, but with the indirect effects these games have," he says. "Violent videogames contribute to the trivialization and acceptance of violence in general and that helps create a cultural climate in which real violence is more likely."

Still, however high-pitched the fervor of social scientists who agree with Koop, many psychologists are nonplussed over the issue, feeling that videogames'

'The experts' are up in arms over the hidden psychological and social effects of home videogames. But how strong are those effects—negative, negligible or at least somewhat positive?

violent images are too abstract to be harmful. "The discussion of videogames and violence seems to me to be silly," says Robert Gable, a psychology professor at Claremont College who has conducted extensive research on arcade videogames. "Parenting styles are much more powerful in terms of a child's attitudes toward violence."

Arguing along the same lines, Jerome Schulster, an associate professor of psychology at the University of Connecticut who has published several articles on the psychology of videogames, says, "I find the violence argument a little overwrought. Look at hockey. Look at football. Those are much more violent than any home videogame, and few people complain about children's involvement with those sports."

Overt Involvement

There's also disagreement over Koop's contention that children are becoming addicted to the games and are becoming socially isolated. On Koop's side, Dr. Norman Paul, a family therapist at the Boston University School of Medicine and the vice president of the American Family Therapy Association, says, "Some of the kids get so massively involved in the games, it's as if they want to forget themselves and become part of the screen."

In general, however, most psychologists and therapists have only mixed views on the isolation issue. New York psychologist Elayne Kahn agrees that some people may become fixated on the games and that such a fixation could hamper some children's development of verbal and social skills. But she points out that "the healthy child will not get so emotionally caught up" in the games, and that she has "not seen any aberrations of childhood behavior due to them."

Child psychologist Michael Gindi feels that home videogames "can be highly addictive" and "can distract kids from school." Yet, as Gindi's own practice demonstrates, the games can also be a useful learning tool. "I play videogames with my patients and teach them how to recognize the patterns in the games in order to be more successful at them," he says. "I then use the games as a metaphor for life: The key to any kind of success is to recognize patterns and come up with a proper response. Just as they learned the patterns to *Pac-Man*, the kids can learn the behavior patterns at school or at home and get along better."

Disagreeing with the Surgeon General entirely, New York City psychotherapist Sherry Jacobs argues that home videogames don't induce isolation, but rather can bring kids into the social arena. "I have seen children who are not athletically inclined and who have not had access to peer acceptance before," she says. "Videogames are a new common ground in which they can be accepted."

How Families Fare

Implicit in the whole discussion of the impact of videogames on the individual is their possible impact on the family. Do home games bring loved ones in closer harmony as they shoot down enemy vessels? Or do they create sibling rivalries and cause major disruptions in the household?

Here, again, the effects are unclear. A *Video Review* survey of over 100 video stores around the country found that many parents use videogame consoles to

keep the kids out of their hair—as electronic baby-sitters, much as TV has often been used. On the other hand, some parents use the games to keep their children off the streets and to keep them in line: Johnny can't play *Astrosmash* until he finishes raking the yard.

Among the professionals, videogames are generally seen as having a largely neutral effect on the family. While Dr. Paul believes the game console is a disruptive force, isolating family members from one another, Dr. Robert Green, co-director of the Redwood Family Therapy Center in Berkeley, CA, believes it has the potential to bring family members closer together. But most therapists seem to agree that its effect is highly variable and dependent on how the individual family handles the games. "It's not the videogames *per se*, but the way they get utilized in the struggles going on in the family that is important," Dr. Green contends.

The Surgeon General's remark aren't the only assertions about videogames causing debate. In responding to Koop, many videogame makers are claiming their games are not only fun but educational. Jack Wayman, senior vice president of the Electronics Industry Association, says home videogames are a "way for kids to overcome their fear of using a computer." It is a claim often heard. Retailers use it as a sales pitch. Parents rationalize their children's long hours at the joystick with hopes that *Pac-Man* may interest their kids in computer programming. But do home videogames really have much connection with computers?

The Computer Question

Among educators, the common assumption is that kids can adapt to computers more easily if they have some experience with videogames; many of today's young computer whizzes who are creating videogames did indeed get interested in programming through playing.

On the other hand, according to Tom Baker, a computer instructor and learning adviser who monitors students' educational progress at John Brashear High School in Pittsburgh, videogame addiction may be an impediment to success with computers. "I thought that, with the popularity of videogames, kids would do extremely well with computers. But they don't," he says. "There's no real transition between passively playing a game and programming a computer. Knowing algebra is a much more important step to handling computers than is playing games."

Professor Gable also sees little connection between playing home videogames and operating a computer. "I don't think children are learning any more about computers while playing videogames," he says, "than they do when they drive a car that's equipped with a computer-run fuel-injection system."

Upon hearing Gable's remark, researcher Victor Walling responded, "Most people are going to be driving computers in the future, not repairing them." What he means is that most people who will eventually use computers will never learn about their innards nor even learn how to program them. What's important, at this point, is getting comfortable with the machines.

"Exposure to videogames does give people the sense that they can interact with computers and have fun doing it," Walling believes. "The most important asset of videogames is that they are teaching children to interact with a display screen—that TV doesn't have to be passive."

Perhaps the most crucial issue surrounding home videogames that has yet to be fully researched is the physical effects of playing the games. There appear to be both benefits and drawbacks. For every new story of a hospital using videogame consoles for physical therapy, a new study emerges suggesting that the game might be harmful to your wrist, your eyes or your heart.

Playing with a Handicap

The most obvious physical benefit of the games is that they improve hand-eye coordination. While some overweaning young game players have developed their coordination to remarkable degrees, a more important application of this asset of the games has been as therapy for the disabled.

The examples are many. At the Mission Valley Elementary School in Fremont, CA, videogames are being used to develop the hand-eye coordination of children with learning disabilities. At the Point Pleasant Hospital in Point Pleasant, NJ, long-term patients work out on the videogame console to help regain movement in their fingers, hands and arms, as well as to keep their minds active. Dr. William Lynch, director of the Brain Injury Rehabilitation Unit of the Veterans Administration Medical Center in Palo Alto, CA, has used the games with 30 patients since '78 to improve their attention spans and reaction times and to improve their fine motor skills.

Then there are the claims of harmful physical effects of playing videogames. In the May 28, '81 issue of *The New England Journal of Medicine*, a medical student reported a case of "Space Invaders wrist," described as

"minor ligamentous strain of the joint from repeated, prolonged playing." A more serious case was reported in the *British Medical Journal's* June 12, '82 issue, in which a young girl had an epileptic seizure because of the flashing lights of one videogame.

Much of the concern about the physical effects of videogames involves an apparent increase in the incidence of cataracts. In a letter to *The New England Journal of Medicine* published on September 30, '82, three physicians claimed that the use of TV sets more than 12 years old as videogame display screens may expose players to excessive levels of radiation. The color sets built before '70, in many cases, emitted higher levels of radiation than is now permissible by federal standards. A player sitting close to such a set for long periods of time, the doctors argued, may be seriously damaging their eyes. A spokesperson for the Electronics Industry Association responded that few of the pre-'70 sets are still being used, and even fewer of those have the high radiation levels the doctors fear.

Dr. Milton Zaret, a well-known ophthalmologist from Scarsdale, NY, has done extensive case-study work on the effects of cathode-ray tube display terminals on the eyes. In his opinion, at least, even TV sets built after '70 emit unsatisfactorily high levels of radiation and using them for videogame playing could cause cataracts. Even players of home videogame systems that have their own screens may be in danger; any screen utilizing a cathode-ray tube, in Zaret's mind, emits potentially harmful radiation.

Continued on page 135

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VR'S SECOND VIDEO HALL OF FAME



Baseball has Cooperstown. Basketball has Springfield. And video has New York, where *Video Review* presents its annual Hall of Fame awards. Honoring pioneers who, through their technological genius or marketing wizardry, helped make the video revolution possible, the ceremony marked the induction of four new members to the Hall of Fame.

The awards, presented at New York's Grand Hyatt hotel and co-sponsored by *Video Review*, *Electronic Fun* and

Video Business magazines, were given to Brig. General David Sarnoff, Dr. Norikazu Sawazaki, Nolan Bushnell and Andre Blay. For a look at their individual contributions to video, see *Pioneers in Profile*, next page.

Pictured above, left to right: Bill O'Brien, VR associate publisher; Roland DaSilva, VB publisher; George Kopp, EF editor; Dr. Norikazu Sawazaki; Richard Ekstract, VR, EF and VB president; Rosita Sarnoff; Bob Lundquist; Andre Blay; David Hajdu, VR editor.

WORLD ANNUAL HALL OF FAME



Above left: George Kopp congratulates Rosita Sarnoff, who accepted the posthumous award on behalf of the Sarnoff family. Above right: David Hajdu presents Dr. Norikazu Sawazaki with his award. Left: Bill O'Brien congratulates Andre Blay on his induction into the Hall of Fame. Above: Nolan Bushnell sent a videotaped acceptance speech. Bob Lundquist, vice president of Pizza-Time Theaters, accepted Bushnell's award by proxy.

PIONEERS IN PROFILE

BRIG. GENERAL DAVID SARNOFF



"I have in mind a plan of development which would make radio a household utility in the same sense as a piano or phonograph. The idea is to bring music into the home by wireless . . ."

These words, written in 1916 by David Sarnoff, marked the beginning of an era, and their author lived to see not only that dream but many others as well come true.

The story of Brig. General David Sarnoff reads like a fairy tale: It's the American dream come true. At the age of nine, Sarnoff and his family emigrated from Russia to the US. Supporting his family by selling newspapers and working as a delivery boy, he managed to save enough money to buy a telegraph machine. At the age of 15, he got a job as an office boy at the Marconi Wireless Telegraph Company of America. He worked his way up to wireless operator, putting in time at several of Marconi's stations along the East Coast and aboard ships. In fact, it was Sarnoff who received the distress signals of the *SS Titanic*.

When the Radio Corporation of America was founded in 1919, Sarnoff was made commercial manager, and, in 1930, became its president. Despite the significant advances being made in radio technology at that time, Sarnoff was already looking ahead to television. "Now we add sight to sound," he announced at the New York World's Fair in 1939. He saw this dream come true when, in 1946, RCA introduced the first post-war television receiver available to the American public.

Sarnoff's creative mind, his drive and his ambition made him one of the strongest forces behind broadcast television.

DR. NORIKAZU SAWAZAKI



Ever wonder what the difference is between an audio-cassette recorder and a videocassette recorder? The answer is helical scan. In '53, around the time that David Sarnoff was dreaming about color TV and Nolan Bushnell and Andre Blay were playing baseball in their backyards, Dr. Norikazu Sawazaki, an engineer at Toshiba in Japan, began researching a better

way to make video recordings. At that time, it took a meter of tape for four minutes' worth of recording. Forget the quality of the recording—as poor as it was, that was the least of the problems confronting Sawazaki.

Figuring that stabilization of tape speed was the major problem with the existing systems, he devised the helical scan method. Suffice it to say that in a helical system, the tape spirals around the video head rather than running over it in a straight line. Thus, a complete TV picture can be recorded on a long, slanted track.

Sawazaki's helical scan method was one of the most important advances in video technology and has proved to be useful in other areas of electronics as well, including computer memory storage. Now, the technology is being adapted to attain high fidelity audio sound with video recorders.

Sawazaki continues his research into recording techniques at

Toshiba's Sawazaki Research Laboratory. His research has helped solve a problem that plagued the early days of video: tape dropouts. His current efforts are focused on increasing the density of memory storage on both tape and disc.

NOLAN BUSHNELL



What do you get when you cross an engineering whiz, a creative genius and an ambitious entrepreneur? Nolan Bushnell, of course—hero of many a videogamer and envy of even more businesspeople trying to keep pace in the fast lane of video technology.

Bushnell began his career about 12 years ago—eons in videogame time. Fresh out of M.I.T., he was an employee at

Ampex and spent his spare time at home exploring new electronic avenues. The product of this experimentation came in 1971: *Computer Space*, the first coin-op videogame. Realizing that the world wasn't yet ready for a simulated space shoot-'em-up, Bushnell turned to something more familiar. Hence, the legendary *Pong* and the birth of Atari.

In '76, Bushnell sold Atari to Warner Communications and, not long after, resigned his position as chairman of the board to launch a new project.

Because Bushnell has apparently been successful at whatever he puts his hand to, there is much speculation about what his next venture will be. When he left Warner Communications, Bushnell signed an agreement of non-competition in the videogame field until this October. Many believe he's got some more surprises up his sleeve, with guesses ranging from revolutionary games to home robots. Just be ready to warp into hyperspace come October.

ANDRE BLAY



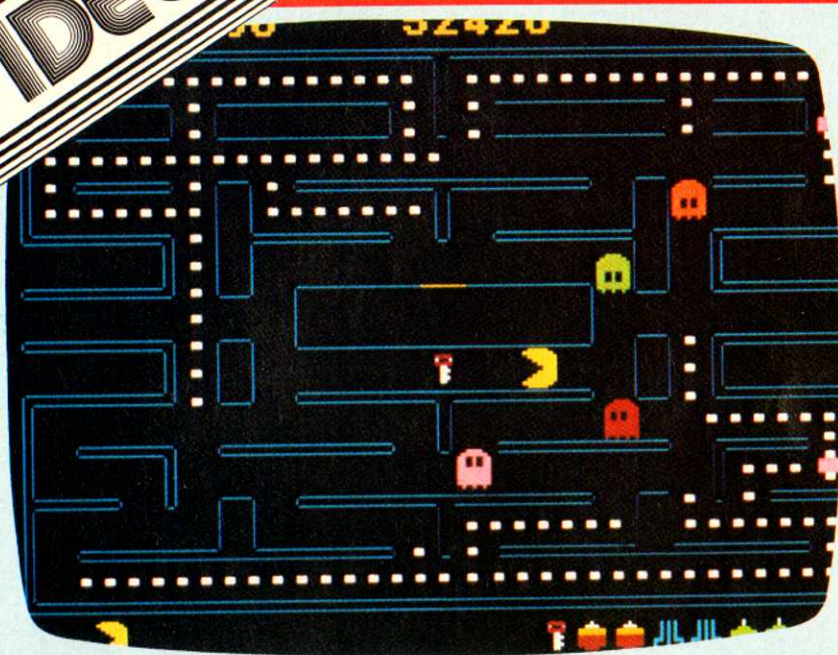
Back in '69, Andre Blay named his audiocassette duplicating company Magnetic Video—before consumer videocassette recorders hit America. Ten years later, he was running not just a prospering, but *the leading*, prerecorded videocassette company in the country.

The idea of selling movies directly to home viewers may be taken for granted now, but

in '77, when Blay went to Hollywood in search of movie rights, it was unheard-of. He convinced 20th Century-Fox to sell him the rights to 50 movies, went back to his company in Michigan and began duplicating. Two years later, sales were so substantial that 20th Century-Fox bought Blay's company for the tidy sum of \$7.2 million, keeping him on as president.

In August, '82 he joined Embassy Video, returning to his first love—selling programs to VCR owners. Embassy, needless to say, considers itself more than a little lucky to have obtained this rare commodity—a savvy businessperson with an eye for the future. Already, he's expanding Embassy's programming to include not only feature movies but such original music programming as *Elton John: Visions*.

Super Pac-Man, Smurfs and more



Atari's Pac-Man for the 5200: edited for TV.

Cartridge

PAC-MAN ★ ★ ★
 Adapted by James Andreasen from the Midway arcade game. (Atari 5200-compatible cartridge. \$39.95)

By Frank Loveco

When is a Pac-Man not a Pac-Man? Now. Plug in the new version of *Pac-Man* for Atari's "super system," and you get, at first glance, a work of video art—an Andy Warhol-like replication of a pop-culture icon. It's pretty and it's sharp. The yellow Pac-Man munches dots and fruit around a maze familiar to millions, eating energy pills and then scooping up retreating blue monsters, earning points and clearing the board, just as he's done in the arcades.

In most ways, the 5200 version of *Pac-Man* is practically the arcade game's *Doppelgänger*, with uncannily similar graphics and sound effects, even down to the familiar intermission scene that appears after the second board has been cleared. State-of-the-art technology is certainly evident along with the 5200's state-of-the-art price. But as you get into the game, you begin to notice something disappointing: For all the effort that went into reproducing the surface qualities of the game, this isn't the same *Pac-Man*. And it could have been.

Normally, I prefer to judge something for what it is, not what it isn't. With adaptations,

though, comparisons are both inevitable and legitimate—Atari, after all, is trading on the *Pac-Man* name and reputation. And *Pac-Man* is unlike anything else. When a videogame has been analyzed as no other videogame before it, when whole books and schools of thought devoted to *Pac-Man* gamesmanship have helped *Pac-Man* acquire a stature equal to those of *Scrabble* and *Monopoly*, it's surprising to see the equivalent of a *Scrabble* board with the bonus-point squares in different places, or of a *Monopoly* game where all the rents are the same. Why bother to be so painstakingly accurate with almost everything else, I wonder, and then change both the maze and the array of extra-point fruit, obliterating the usefulness of all the patterns you've ever learned and the distinctive pace of the game?

Atari evidently widened and shortened the original *Pac-Man* maze to fit the shape of the TV screen. Why? There's no rule that videogames have to fill every inch of the screen. It's also hard to understand why the original game's lineup of "fruit" (actually including a bird, bell and key in the most advanced boards) has been changed, along with the corresponding variations in the monsters' "blue time." The new lineup is not only different (including an obnoxious Atari symbol), but replaces the original game's pacing dynamics with something much less imaginative—the game simply gets faster and the monsters' "blue time" shorter.

It's no news that home-console joysticks

seem to be as ergonomically well-designed as the average stiletto-heeled shoe, but this one requires a precision of touch usually reserved for diamond cutters. Unless you maneuver the non-self-centering stick into precisely a three, six, nine or 12 o'clock position, *Pac-Man* refuses to respond. You can learn to hit your marks eventually, I'm sure, but the quick, basketball-like moves of a good *Pac-Man* game are made exceedingly difficult.

Since the maze isn't the same, you can't use dot-for-dot Ken Uston's patterns of his masterful *Mastering Pac-Man* book. (I didn't try Jim Sykora's and John Birkner's *Video Master's Guide to Pac-Man* patterns, but they're based on the original maze as well.) At least fundamental points of *Pac-Man* strategy still work (don't be greedy for monster snacks and do concentrate on clearing as many boards as possible; don't try to have Packy outrun monsters on the straightaways, but rather elude them by darting around corners), and the monsters behave as they do in the original. You earn an extra *Pac-Man* upon scoring 10,000 points instead of the 15,000 (and up) required on most current *Pac-Man* coin-op games, which is a pleasant change. While *Pac-Man*'s familiar "wocka wocka" voice has been replaced by one that sounds like "breaker breaker," this doesn't detract.

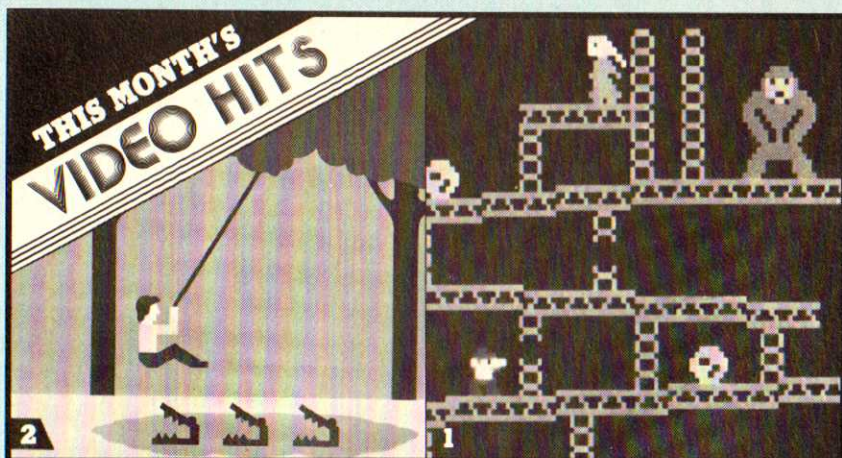
This game, in fact, is a lot of fun to play—as are *KC Munchkin*, *Jawbreaker* and *Cat Trax*, to name a few other *Pac-Man*-inspired videogames. But, like them, this still isn't *Pac-Man*. *Pac-Man Jr.*, maybe, or *Pac-Man II*. Maybe even *Pac-Man: The Special Edition*. A *Pac-Man*, in other words, that's been edited for TV. □

ZAXXON ★ ★ ★ ★
 Designer uncredited. Adapted from the Sega/Gremlin arcade game. (Coleco ColecoVision-compatible cartridge. \$30 approx.)

By Scot Morris

A TV screen is obviously a two-dimensional surface. This fact kept even sophisticated arcade videogames graphically limited—until *Zaxxon*, one of the most visually stunning games to hit the arcades, turned up last year with the best approximation of three-dimensionality I've seen. Now ColecoVision has come out with a beautiful home version. The sophisticated, high-resolution picture is perhaps the best yet of any home cartridge. (Cont.)

Scot Morris is games editor of *Omni* and a contributing editor of *Psychology Today*. He joins our regular reviewers this issue.



Last Month This Month

Top Carts*

1	1	DONKEY KONG Designer uncredited. Adapted from the Nintendo arcade game. (Coleco, Intellivision- and VCS-compatible, \$30)
—	2	PITFALL! Designed by David Crane. (Activision, Intellivision- and VCS-compatible, \$31.95)
—	3	CARNIVAL Designer uncredited. Adapted from the Sega/Gremlin arcade game. (Coleco, ColecoVision-, Intellivision- and VCS-compatible, \$30)
—	4	SWORDQUEST Designed by Dan Hitchens. (Atari, VCS-compatible, \$34.95)
—	5	ZAXXON Designer uncredited. Adapted from the Sega/Gremlin arcade game. (Coleco, ColecoVision-, Intellivision- and VCS-compatible, \$50)
3	6	FROGGER Adapted by Ed English from the Sega arcade game. (Parker Brothers, VCS-compatible, \$30)
—	7	MEGAMANIA Designed by Steve Cartwright. (Activision, VCS-compatible, \$31.95)
—	8	REALSPORTS FOOTBALL Designed by Robert Zdybel. (Atari, VCS-compatible, \$26.95)
—	9	TRON DEADLY DISCS Designer uncredited. (Mattel, Intellivision-compatible, \$30)
—	10	RAIDERS OF THE LOST ARK Designed by Howard Warshaw. (Atari, VCS-compatible, \$37.95)

Behind the Top 10 Games: When Shakespeare wrote, "The play's the thing," we doubt he was thinking about **Pitfall!**, but the Bard's words apply as much to videogames as to the theater. When bereft of a well-known arcade character or movie name, players seem to seek out good play value, and so critically well received **Pitfall!** enters the chart at the #2 position. Edging it out is last month's topper, **Donkey Kong**, whose fame, rather than play value (on the Atari and Intellivision versions), seems to be keeping it the king of the videogame hill. (Last month's standings on this debut Top 10 chart are, incidentally, taken from *Video Business* magazine.)

Coleco continues to thrill videogame players with its faithful renditions of arcade titles, with the ColecoVision versions of **Carnival** and **Zaxxon** becoming immediate hits.

Other hit games this month include Atari's first entry in the multi-cartridge genre, **Swordquest**, Parker Brothers arcade-inspired **Frogger** and Atari's second-generation sports game, **RealSports Football**.

Next month, look for the highly publicized **E.T.** cartridge to take Top 10 honors owing to its combination of a highly recognizable character in the highly touted, ever popular adventure-game format. (M.T.)

*Based on a nationwide survey of sales at presstime. All games are in cartridge format unless otherwise noted. Suggested retail prices are approximate.

As in the arcade version, you pilot a fighter across a flat asteroid surface, swooping low to strafe fuel tanks and gun turrets, soaring and banking to avoid counterfire and brick walls, then rocketing past the force field (if you're lucky) to do battle in deep space. Then your fighter is on to the next asteroid, where it meets the evil robot Zaxxon and his Mobots.

There are scores of fly-and-shoot games, of course, but this one has a difference. Flight is not left-to-right on a plane or at all angles on a plane, but is diagonal from lower left to upper right. Your view is of a fighter that truly seems to be flying across a three-dimensional surface.

Similarly, firing is not straight on the plane, nor is it straight ahead as in cockpit-view games. Rather, it's along diagonal lines of perspective that can't be directly sighted but have to be inferred by looking at the fighter's shadow on the wall and asteroid surfaces and on the white, pipeline-like grid below. One tip: Fire at the lower left notch in the closest brick wall whenever the force field shows up. Note where your fire penetrates the notch, and, if you're careful, your fighter itself can slip through.

It's been my experience that the longer a company is in the business of putting out games, the better-written are its instruction booklets. Newcomer ColecoVision fits the pattern. I'd like to know more about the strategies for getting through a forcefield and for advancing to further screens, or to know the specific differences between skill levels—but the booklet gives only a cop-out paragraph entitled "The Fun of Discovery." Here the company says, in effect, "We're not going to tell you any more about how to play this game. Just think how much fun you'll have trying to figure it out for yourself." Phooey.

My criticisms are minor, however. This is a genuine, four-star game, one of the most beautiful and challenging I have seen. Now that I've played it at home, not worrying about spending quarters or about making a fool of myself, I'm ready to try **Zaxxon** in public. Now, at least, I don't have to look over someone's shoulder to figure out what the game is all about. □

SMURF: RESCUE AT GARGAMEL'S CASTLE ★★★★★

Designer uncredited. (Coleco ColecoVision-compatible cartridge. \$30 approx.)

By Ken Uston

Smurf, sort of a cross between **Pitfall** and **Donkey Kong**, is a game which will be of interest primarily to children, though it's not just kids buying all those Smurf watches, lunchboxes and watching the popular TV cartoon shows. The game's central character, of course, is one of those diminutive gnome-like characters created by cartoonist Pierre "Peyo" Culliford. The Smurf's object is to rescue his beloved Smurfette, who has been kidnapped by the nefarious wizard Gargamel and is being



Spacejetting in Coleco's "3D" Zaxxon: a breath of fresh air.

held captive inside a scary and treacherous castle.

The graphics of this game are excellent. The Smurf progresses through a series of colorful scenes: from a deep green forest, to rolling plains beneath cumulus clouds floating in a blue sky, to a dank, black cavern teeming with purple stalactites and stalagmites, and finally into Gargamel's Castle, inhabited by spiders and a large skull.

The Smurf must jump over a series of obstacles, *a la* Mario the Carpenter in *Donkey Kong*. In the forest, he encounters white picket fences; in the fields, there are mounds and patches of tall grass, and stalagmites protrude from the cavern floors. At the end of his journey, the Smurf must jump onto a huge white skull (ugh!) before rescuing the gorgeous Smurfette.

As is the case with nearly every ColecoVision cartridge, either one or two persons can play at one time, and there are four skill levels. At all levels except the first, hawks, spiders and bats try to keep your Smurf from completing his mission. Worse yet, your Smurf must make double jumps over some of the mounds, considerably complicating his journey. At levels three and four, the journey becomes much longer, the player having to scroll through increasing numbers of screens before completing the trip. Your Smurf can't be a malingeringer either, because he is assigned a finite number of energy units. These are restored when he enters a different scene, when he successfully rescues Smurfette, or when a new life comes on the screen. You get five Smurf lives at each level.

The simplicity of the game, the easy controls (only the joystick is needed), the mellow nursery-rhyme tune that continually plays and the cute, constantly smiling Smurf will appeal to children. Some parents, however, may find the spiders, bats and

skull nightmare-inducing for toddlers.

Here are a couple of playing hints:

- Your Smurf may safely walk on stalagmites if they do not protrude far from the ground. So avoid the tendency to have your Smurf jump over these prematurely and get caught on their jagged far sides.

- When approaching one of the extra-high, double-jump mounds, be sure to bring your Smurf to a complete halt. Then have him jump once in place and cause him to jump a second time before he completes the first jump. He will then execute a perfect forward double-jump over the impediment.

- It's possible to jump over, as well as duck, such flying threats as the hawks. If they zoom down close to the ground, have your Smurf jump over them. Better yet, have the Smurf execute a double jump and

he'll soar, Superman-style, above them.

Although I'm generally wary of video games adapted from other media, this is one case where the transfer works. *Smurf* is charming. □

GORF ★

Designer uncredited. Adapted from the Midway arcade game. (CBS VCS-compatible cartridge. \$27.50 approx.)

By Michael Blanchet

Videogame players come in two species: Coin-opus Quartersaurus (arcade-goers) and Home Systemians (home-console owners). Quartersauruses contend that home games are child's play compared with arcade games, while Systemians often prefer to exchange ultrasophisticated coin-op play and graphics for the convenience of games at their fingertips, day or night.

CBS Video Games had the right idea, then, in choosing the popular coin-op game, *Gorf*, as the basis for one of its first two game cartridges. I doubt it'll convert either coin-op or home-system aficionados to the opposite realm, though. As far as complexity of game play and graphic appearance are concerned, *Gorf* is far too simple a game.

As in the arcade version, you are armed with an interstellar space-fighter. Your mission is to confront three legions of Gorfian Robots, each of which employs a different assault strategy. Defeat these attacking waves and you reach the showdown with the Gorfian Flagship.

Mission one in *Gorf* is called Astro Battles, a version of *Space Invaders*. Mission two, Laser Attack, pits your fighter against a flock of kamikaze badminton birdies that attempt to ram your ship and a lone laser cannon that is bent on skewering your fighter with laser beams. The third mission, Space Warp, with aliens arcing across the screen,



Coleco's Smurf: gentle heroic fantasy or nightmare-inducer?

is very reminiscent of skeet shooting.

Since this version of *Gorf* allows your ship only horizontal movement (unlike its coin-op counterpart, which offers a degree of vertical mobility), it's more a test of reflexes than an exercise in strategy. Some tips:

In every stage of the game, the Gorfians can reach the sides of the screen. Your fighter cannot. The lesson here is to avoid taking the fighter to its lateral limits, since that leaves only one direction in which it can move, leaving it open to back-door attack.

In mission two, it's important to keep on the move, for two reasons. First, those diving birdies are fast. Second, if the first laser cannon is destroyed before all the birdies are vaporized, a replacement will materialize in four seconds.

In Space Warp, move your fighter just a hair left of center and fire away. The spaceships walk right into your line of fire every time. Just like shooting fish in a barrel.

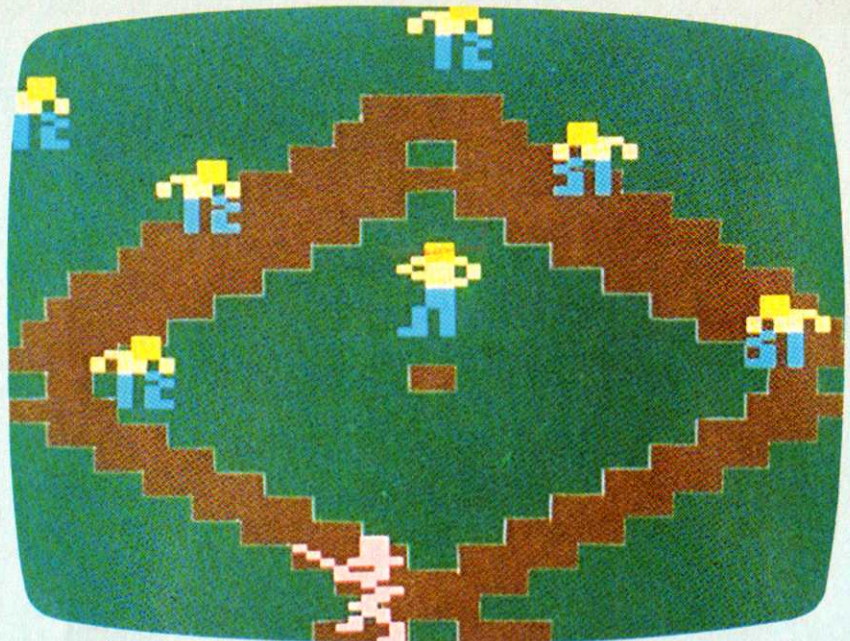
Despite these few strategic tricks, *Gorf* bears only a slight resemblance to the arcade game. It's also light-years behind cards of a similar flavor, such as Imagic's *Demon Attack* and Activision's *Megamania*. It's one of CBS' first efforts in this area, so future games will probably be better. Here and now, though, I wouldn't go for *Gorf*. □

ATTACK OF THE TIME-LORD ★ ★ ★ ★

**Designed by Ed Averett. (Odyssey
Odyssey² cartridge. \$34.95)**

By Phil Gerson

Attack of the Timelord appears to be an updated and improved version of Odyssey's earlier, and disappointing, *Alien Invaders Plus*. Once again you are called on to save the planet earth from alien attack, and once again your weapon is a pyramid-shaped laser cannon, now called a Time Machine (funny—it doesn't look very different), which you can move back and



Atari's RealSports Baseball for the VCS: not so real. . .

forth across the bottom of the screen. It's an excellent game, difficult to master.

Your opponent is the impressively titled Spynus the Deathless, Timelord of Chaos, who appears at the start of each game segment as an orange skull radiating a burst of color—a nice graphic effect. He fades away to be replaced by a rotating Time Warp (another nice effect) from which eight enemy Time Ships fly out in *Centipede* fashion.

The ships dart around seemingly at will and drop missiles your laser cannon can easily dodge or blow up. Shooting down all the Time Ships takes you to level two. This time, the enemy ships carry a second weapon: orange antimatter mines that can adjust their course to follow your laser. Added to the arsenal at level three are Annihilators. Any of these small green

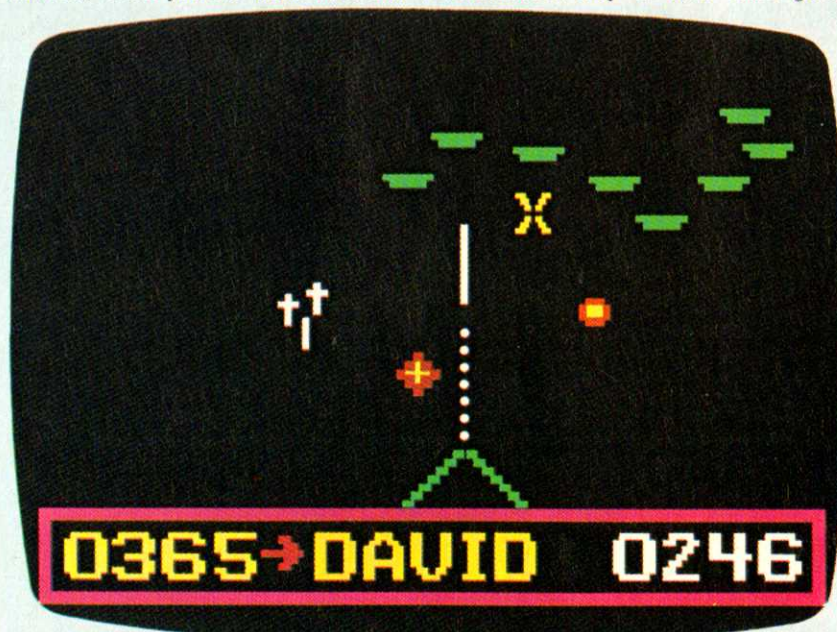
globes left undestroyed will hit the ground and roll horizontally toward your laser cannon. At level four, the enemy is also equipped with diamond-shaped Nucleonic Time Killers that chase your cannon as they fall.

No new weapons are thrown at your cannon after that, but, at level five, the Timelord speeds up the action and his ships fire ever more deadly and complex combinations. You do get points for everything you hit, and can rack up a reasonably impressive score after six or seven levels.

The Timelord can speak when you play the game with the optional Odyssey² voice module. At the lower levels, he adds to your frustration by ordering his ships to "destroy the earthling" or warning that "The earth will be mine!" The Timelord is a gallant foe, however, and will reward skill at the higher levels by commenting, "Not bad, human," "A commendable defense" and the ultimate compliment, "You're a worthy opponent."

At the first level, and even the second, you'll do well to hold down the fire button for continuous firing to destroy the bulk of the enemy ships, then to use careful, well-timed shots to hit the last one or two. The Annihilators that show up in level three travel only about a quarter of the width of the screen after they hit the ground, then fade out. So move as far away as possible from any you can't destroy in the air, and avoid getting trapped at the outside edges of the playing field.

Timelord falls short on two counts. Most annoying is that you get only one Time Machine, and losing it starts the game back at level one. So there's no way to build skill by practicing at higher levels. And while the voice enhancement in the form of the Timelord's melodramatic comments between levels is a nice touch, I would like to see it perform a more useful and game-related function. □



Odyssey's Timelord: Annihilators to annihilate and time to kill.



... compared to Mattel's classic Major League Baseball.

MAJOR LEAGUE BASEBALL ★ ★ ★ ★
 Designer uncredited. (Mattel Intellivision-compatible cartridge. \$30)

REALSPORTS BASEBALL ★ ★
 Designed by Joseph Tung. (Atari VCS-compatible cartridge. \$26.95)

By Dan Gutman

At last Atari is back in the ball game. No longer must we listen to George Plimpton comparing Mattel's classic *Major League Baseball* with Atari's pathetic old *Home Run* cartridge. With the release of *RealSports Baseball*, Atari VCS owners finally have a game that's at least in the same ballpark. The old national pastime has finally met the new national pastime—videogames.

Don't kid yourself, though—living-room baseball is not the real sport, whether it comes from Atari or Mattel. In living-room baseball, all your players are two inches tall and right-handed. There are no wild pitches, passed balls, balks, double steals or hit-and-run plays. In the Atari version, your second baseman seems to snag the ball too much. In both games, however, you can hit home runs—which is all the more remarkable in the Intellivision game because all batted balls are ground balls!

Nevertheless, Atari has done an admirable job of devising a somewhat realistic baseball game for its VCS. It has nine independently moving fielders, four types of pitches, fly balls, force outs and stolen bases. Your batter can even "pull" the ball. All of this is amazing when you consider the VCS is now six years old and was designed for simple ping-pong games.

RealSports Baseball's big advantage over *Major League Baseball* is that you don't need to invite a friend over to play. The console is more than happy to take you on, and why not? It always knows what pitch you're going to throw next. (It also counts all late swings as strikes, so learn to swing early

or you'll lead the game league in strike-outs.) The worst thing about *RealSports Baseball* is that if your outfielder misses a fly, it automatically sails over its head for a home run.

Still, as much of an improvement as *RealSports Baseball* is over Atari's earlier version, you've got to wonder why Atari even bothered. The computer memory of the VCS is sufficient for hand-eye coordination games in which you merely have to shoot something and avoid being shot. But after Mattel's precedent, a baseball videogame requires superb graphics, brilliant color, authentic sound and the capability of pitching, hitting and running figures that are like those in the real game.

Yes, sports fans, *Major League Baseball* is still leading the league. Although I think Intellivision is still behind Atari in space games and shoot-'em-ups (no matter what

Plimpton says), the system is tops for sports games. While Atari's *Home Run* was a sandlot game and *RealSports Baseball* is Triple-A, it'll be a couple of summers at computer camp before they reach *Major League Baseball*. The graphics, game play and authenticity of the Mattel game are dazzling, right down to the cheering crowd and the umpire yelling, "Yer out!"

Despite Intellivision's tedious disc/keypad controller, *Major League Baseball* is a breeze to play once you do a little memorization. The fire buttons control the bat, and the keypad lets you utilize fielders and toss the old pill around the horn as a warm-up. Pressing the disc serves a dual purpose—running your players around the basepaths and allowing your pitcher to throw eight types of pitches. Don't bother with those inside and outside pitches, though. They always sail wide and don't fool anybody. Defense is 90% of the game, not pitching. In the Atari game, all of these functions are jammed into the joystick/fire button apparatus. It's not surprising the Mattel game has it all over the Atari version.

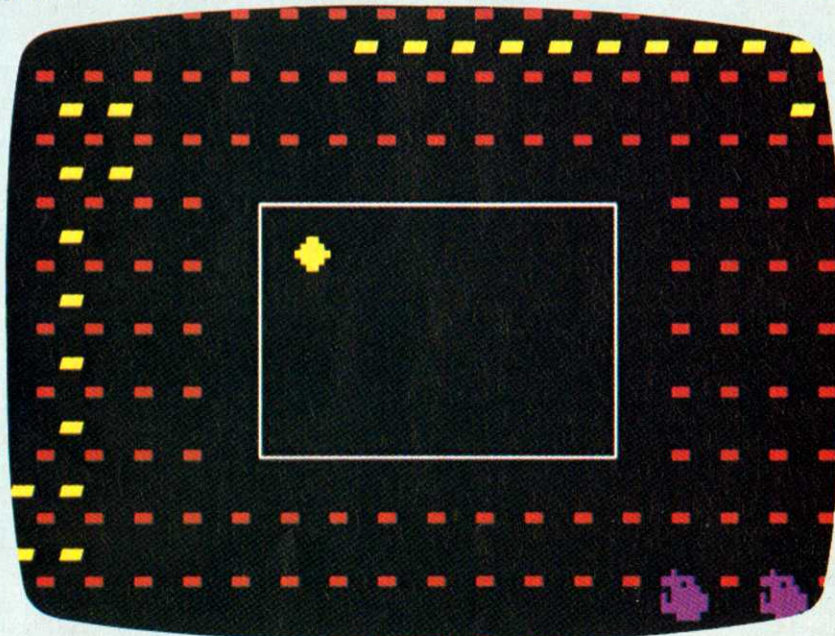
Still, I think somebody ought to put out a baseball videogame with Atari and Mattel executives on the field. Then we'd see some real competition. □

SSSNAKE ★

Designed by J. Ray Dettling and team. (Data Age VCS-compatible cartridge. \$31.95)

By Randi Hacker

According to the *Ssssnake* scenario, "You are a daring big-game hunter who has ventured into the heart of the Amazon's legendary lost world." Well, frankly, the Amazon graphics aren't exactly up to *National Geographic* standards. And as far as this big-game-hunter stuff goes, I'm afraid I'd have to describe your hunter more as a big-game cursor. (Continued)



Ssssnake from Data Age: a sssquare deal.

The playfield is nothing more than a maze with an empty rectangle in the center. This is the fortress in which your hunter seeks refuge from prehistoric beasts—pterodactyls, trachodons and so forth. Your hunter has to shoot at them while avoiding the deadly yellow Ssnakes that slide gracefully across the screen and with no respect for the laws of physics, pass through the impenetrable fortress walls. (So much for asylum in legendary worlds.)

While traveling, your hunter can shoot, but with limited firing power. The hunter can only shoot up when in the upper part of the rectangle, shoot down when in the lower part and right and left . . . guess where.

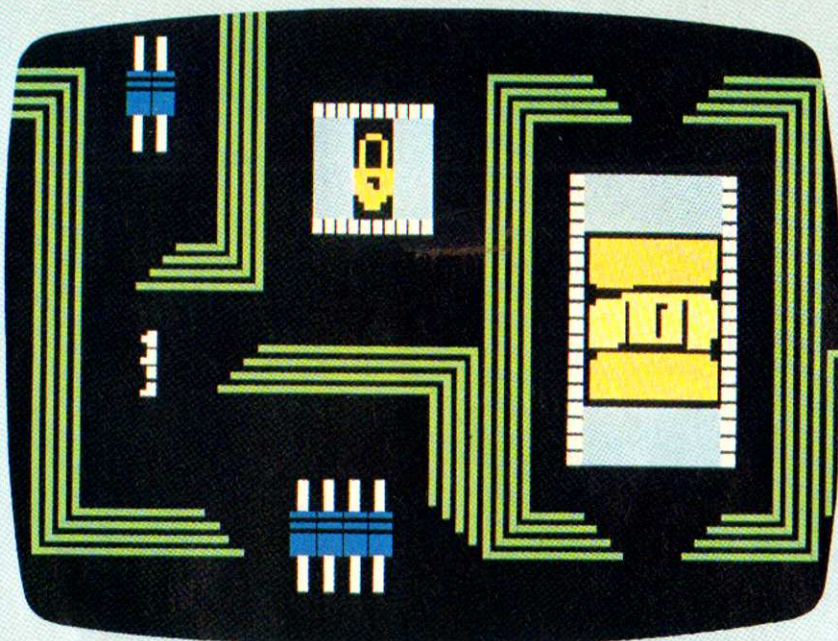
Prehistoric monsters are confined to the outer area and can be destroyed. Ssnakes, on the other hand, are invulnerable to your hunter's fire. As there is very little else to do, however, you might as well have your hunter shoot at them. Although the directions say that a Ssnake, when hit, will break apart into its cube-like ssegments, this is not strictly accurate. Sometimes it does. Sometimes it doesn't. It's hard to figure out what it takes to break a Ssnake up (other than a good joke, that is). You can do the same thing each time, but whether or not it works seems to be up to the Ssnake.

The game is dull. The graphics are nondescript. In addition to the rather sparse accommodations found in the fortress, the Ssnakes are nothing more than yellow boxes following one after the other like so many obedient elephants. In fact, *Ssnake* should really be called *Sssquares*. □

TRON MAZE-A-TRON ★ ★
Designer uncredited. (Mattel Intellivision-compatible cartridge. \$30)

By Howard Polskin

This may be a good game, maybe even a great one. But I have to confess that I'm not really sure how to play it. For three hours, I



Mattel's Tron Maze-a-Tron: What does this maze mean to you?

tried to learn how. I read and re-read the instructions, and never even got close to understanding them. That's a lot of time to invest in trying to learn the basics of a game. Call me a quitter, but I've about given up.

That's not say that it's a bad game (or that I'm stupid—I've played virtually every Intellivision game ever designed and have reviewed several). In fact, *Tron Maze-a-Tron's* level of conceptual sophistication and game-playing difficulty may be a distinct plus for videogame masters seeking a challenge on a par with senior trig at M.I.T. But to average weekend gamers, *Tron Maze-a-Tron* goes several steps beyond casual playing.

For starters, the instruction booklet spans 28 pages and reads like the difficult parts of the Torah. There are many key points I feel

are inadequately described.

Another reason for the complexity of the game is its confusing plot structure. *Tron Maze-a-Tron* is really two games in one. The first phase stars Flynn, the hero programmer wandering around the bowels of a computer seeking computer chips that will enable him to force a confrontation with the evil Master Control Program. This confrontation takes place in the second phase of the game if you're lucky enough to survive the first phase. I wasn't.

In this one-player game, you control Flynn, who runs realistically through a beautiful circuit maze inside the computer. Here, Mattel's visual artistry is evident. Mattel's uncredited programmers have really given this game the look, feel and even sound of what it must be like to be transported into a computer.

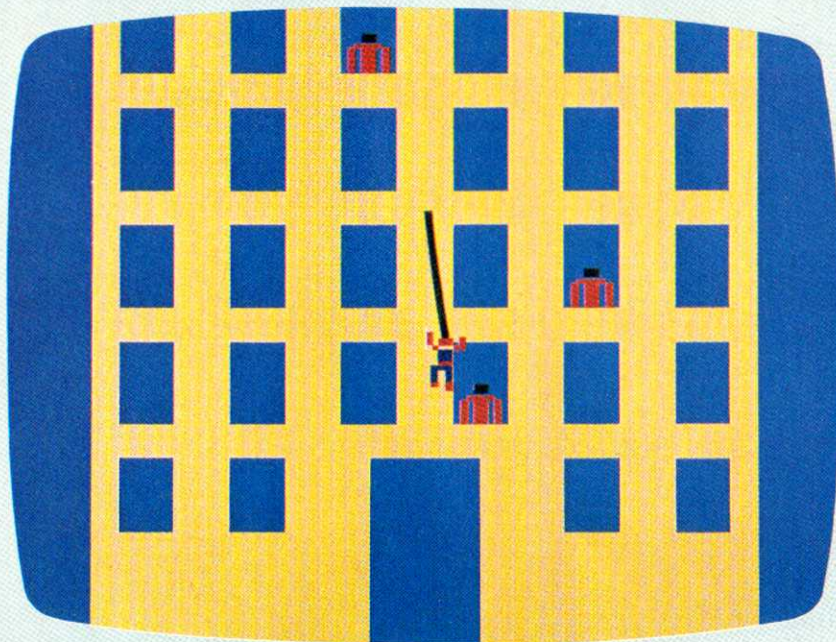
Well into the maze, Flynn haphazardly stumbles across the goal of his journey through the computer: the random access memory (RAM) chips. They take a long time to find. And it takes a longer time to describe what Flynn must do to them to reach the second phase of the game.

The object of this final phase? Once again, the instructions are too oblique to fathom. If half the brainpower that went into designing this game were applied to writing the instructions, this might be a hell of a game to play. I, for one, never got far enough to find out. □

SPIDER-MAN ★ ★ ★
Designed by Laura Nikolich. (Parker Brothers VCS-compatible cartridge. \$28.95)

By Robert Greenberger

I guess after Atari gave us the *Superman* videogame, it was only a matter of time before the current game adaptamania led to other superheroes. Marvel Comics' Spider-



Parker Brothers' Spider-Man: web slinger on bomb-laden tower.

Computer

JAWBREAKER ★ ★ ★ ★

Designed by John Harris. (Sierra/On-Line floppy disc or cassette for the Atari 400/800 with 16K RAM.

JAWBREAKER ★ ★

Adapted by John Harris from his computer game. (Tigervision VCS-compatible cartridge. \$34.95)

By Sheldon Leemon

A strange twist of fate appears to be operating in the videogame field, as evidenced by the appearance of *Jawbreaker* for the VCS.

Originally created for the Atari 400/800 home computer in '81, the *Pac-Manesque* game was one of the first to take full advantage of the superior sound and graphics capabilities of home computers. It scored a huge hit with the public, but not with the folks at Atari, who viewed *Jawbreaker* not merely as *Pac-Man*-inspired, but as a *Pac-Man* clone. Atari's ensuing copyright case against *Jawbreaker* raised some interesting questions about how similar was too similar, for while the maze and the game play of *Jawbreaker* were almost identical to those of *Pac-Man*, the characters (which were, in essence, the things protected by copyright) were given a distinctive twist.

Jawbreaker's protagonist is a set of teeth, which, instead of being chased by ghosts, is pursued by brightly colored happy-faces (those things taht used to say "Have a Nice Day"), each rotating in a different plane. When your clacking, onscreen teeth gobble a big, candy jawbreaker, the pursuers turn a frowning blue. There are points awarded for gobbling candy canes, hearts and toy boats.

For all its similarities to *Pac-Man*, *Jawbreaker* survived the first round of legal wrangling. Not wishing to press its luck, however, Sierra/On-Line reduced Atari's incentive to pursue an appeal by altering the shape of the *Jawbreaker* maze so that it no longer resembles the one used in *Pac-Man*.

Now, as if to show you can't keep a good mandible down, *Jawbreaker* has appeared in a new incarnation as a cartridge for the Atari VCS. Because of the reduced capabilities of the game hardware, however, the translation had to be a loose one indeed. After all, not even Atari could come up with a credible VCS adaptation of *Pac-Man*.

This version of *Jawbreaker* has only a few elements in common with its computer namesake. Here, a set of jagged teeth munches rows of candy bars, while being chased by four rotating happy-faces. When all the bars are eaten, the toothbrush cometh. But the maze is gone, replaced by none horizontal rows of candy bars, and only one happy-face appears in a row at any one time. (Moving gaps in the walls

between the rows do form a sort of shifting maze, though.) Instead of stationary power pills, a white square appears from time to time in the middle of the screen.

The happy-faces seem to stick to your screen persona more closely than in *Pac-Man*. The best strategy I found is simply "twitch-and-go," meaning constant movement and watching out for blind alleys. The energizing square stays put once it appears, so there's no need to rush to it.

The VCS *Jawbreaker* breaks new ground, being the first translation from computer videogame to standard home videogame. But the VCS version demonstrates that one of the hazards of pioneering is you can wind up with an arrow in your back. Standards of excellence have emerged that go beyond the requirement of good play: Sophisticated graphics, a variety of sound and musical effects and a wide range of play options have become necessary. As attractive as the prospect of adapting an innovative computer game for the VCS may be, the resulting game won't be a beauty without fresh appeal of its own. □

SPIDERS OF MARS ★ ★ ★

Designed by Peter Fokos for Tensor Technology. (United Microwave cartridge for the Commodore VIC-20 with 5K RAM. \$49.95)

By Walter Salm

The hero here is an armed, alien fly—not to be confused with the fly of Atari's *Yars' Revenge*. This one is a friendly Martian fly hovering near the red planet's surface. As the fly patrols its territory, it meets many evil creatures: the Spiders of Mars and their friends, the Bats of Saturn, the Dragonflies of Pluto and the Sand Hornets. I don't know where the Sand Hornets come from. Maybe Atlantic City.

You can probably guess what follows—get them or they'll get your fly. You're armed with three of the filthy little beasts (two in reserve), which can fire upon its foes. The enemy creatures don't explode when hit. They just curl up and die.

Your fly—controlled by either the keyboard or a joystick—can be destroyed if touched by any of the enemy creatures (which get rather numerous after a while). In addition, the dragonflies drop "smart" bombs that chase the fly, and the sand hornets fire very accurate missiles. Your insect can outfly the smart bombs, but can't do anything about the hornet missiles.

Spiders is fairly fast-moving, but doesn't have the slam-bang speed of a top space shoot-'em-up. You do have to learn patience and strategy, though—such as maneuvering your fly behind the Sand Hornets so it can blast them without getting blasted itself. Keep that fly moving up and down like an elevator, or it'll get rammed or bombed by the nasties, exploding into smithereens.

Bad or good, the creatures are all very colorful and unmenacing. But don't be fooled by appearances. That's exactly how spiders catch flies. □

Man is a logical follow-up, even though the character's appeal stems not so much from his spider-like abilities, but from the fact that he was a normal teenager (and, eventually, a normal, mid-20s grad student) who didn't necessarily want his powers. Peter Parker (Spider-Man) used to worry more about his grades and his poor old Aunt May than fighting supervillains. Given that these qualities can't yet be translated into a videogame, Parker Brothers (no relation to Peter) has done a very good job.

The game is a relatively simple one. The evil Green Goblin has stationed criminals and bombs throughout a Manhattan skyscraper, and it is up to Spidey to scale the building, capturing criminals along the way. Once atop a high-voltage tower, he must defuse small bombs and get past the Goblin to defuse a Super Bomb before it blows the building sky-high. For each bomb deactivated and each criminal caught, Spidey gets more webbing (to swing Tarzan-like about the building) and the player gets more points. If the criminals or the Goblin touch the web, Spidey is on his way down quickly. Fortunately, he can shoot fresh webs and continue on his way.

There are three difficulty levels, which quicken game play and alter the size of the building. In single-player game variations three and five (and in two-player variations two, four and six), the Green Goblin will block Spider-Man's path halfway up the building and again at the tower. Parker Brothers bills this as the ultimate confrontation between Spider-Man and the Goblin, but he's just an easily avoided obstacle: All he does is move back and forth. The game would have been much more challenging if the two could actually engage in combat.

Since Spidey gains more web fluid with each criminal he touches, the best way to have him scale the building is to attach the web between two floors, on an angle, and have him swing low, catching up to three criminals each swing. This charges him up so that by the time he reaches the top, he's ready to face the bombs. If he falls, but can shoot a fresh web and save himself, it's best to have him move onward in a new direction.

The game's graphics are more than adequate, although the colors are rather garish. Spidey and the Goblin look the way they're supposed to and move easily around the buildings. The best thing to be said about this game is that you get to swing (vicariously, of course) the way Spider-Man does in the comics. It's the game's most notable feature and is certainly more interesting than controlling some anonymous spacecraft.

Spider-Man may not be the comic book brought to life, but it's a good translation to video. There's no Aunt May, but this Spider-Man has more than enough obstacles to keep you occupied between issues. □

Robert Greenberger is editor of Comics Scene and an associate editor of Starlog.

Two-way play: games go interactive



Videogames owe everything to computers, but home computers will always be in debt to Pac-Man, his buddies and the diplomatic mission they have undertaken. Most people intimidated by the powers of the microprocessor probably feel a tad more at ease playing Frogger, then, after getting a feel for the idea of having some form of computer in the home, learning Fortran.

To stimulate interest and boost sales in laser videodisc players, games again have been summoned to play ambassador to the American shopper. Two companies, representing different segments of video technology, have recently introduced interactive videodisc games.

Interactive Gumshoes

Vidmax, working in cooperation with Pioneer Video and NAP Consumer Electronics (maker of the Odyssey² game system), has just come out with *MysteryDisc*. The first title in what is hoped by the company to be a series, *Murder, Anyone?* is a live drama performed by eleven actors. The plot revolves around the apparent murder of millionaire industrialist Derrick Reardon. The player, observing the goings on, matches wits with the onscreen gumshoe, Stew Cavanaugh. To determine the murderer, motive and method, one sifts

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through the alibis of all eight suspects.

Murder, Anyone? is a test of your abilities to observe and deduce, a theme consistent with many other current home videogame offerings. But instead of joysticks and fire buttons, players must crack the case with the aid of the features inherent in laser disc players, such as dual soundtracks, freeze-frame, random-access frame search and random-access chapter search. (For a full review of *Murder, Anyone?*, see page 80.)

LV Arcade

Late last year, Sega Enterprises—one of the biggest arcade game companies—unveiled a working prototype that combined the speed and clarity of laser discs with the power of a computer. Tentatively titled *Astron Belt*, it is slated for future introduction

cockpit, the player, as pilot of a fighter plane, encounters various enemy craft. Hit one and it explodes; get hit and the fighter plane explodes. Though the game is commonplace in story line, the onscreen action is breathtaking to behold. The footage and special effects are as good as those seen in such movies as *Star Wars* and *The Empire Strikes Back*. I could almost picture myself behind the controls of the Millennium Falcon fighting off the Imperial attack ships.

This is all fine and dandy, but of what benefit is this prototype to owners of LV players looking for original and stimulating programming? Sega declined to say when games such as *Astron Belt* would be available for the home. In a recent interview, however, David Rosen, Sega chairperson, did say that his



Laser fare: LV disc first in a series of interactive games for adults.

as a coin-operated videogame.

Aside from graphics, *Astron Belt* differs little from the garden variety outer-space shoot-'em-up. Viewing the action from the perspective of the

company intends to begin selling these laser disc/computer games for home playing in the near future, but no date or specific game was mentioned. □

PAY TV...

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So, the prospective cable-TV pirate needs two things: a cable decoder and a clear line. The cable decoder can be purchased from mail-order houses or from any number of clandestine neighborhood contacts. To get a clear line, the pirate will likely have to climb up a pole and remove the trap. Because of that, cable companies have been more successful prosecuting pirates than any other pay-TV company has been.

The legal situation surrounding cable-TV piracy differs greatly from that of STV and microwave-TV piracy. According to attorney Steve Bailey of the Policy and Rules Division of the FCC, because cable does not concern over-the-air signals, most courts do not regard it as under the jurisdiction of Section 605 of the Communications Act. Instead, cable-piracy legislation has been left up to state and local governments.

"All 50 states have some law pertaining to cable-TV piracy," says Ed Dooley, a spokesperson for the National Cable Television Association. "Two dozen states have laws that expressly prohibit cable piracy. The others have more general statutes regarding electronic transmissions that apply to cable. But the laws vary a great deal. For instance, in Virginia it is a criminal felony to steal cable service. In New Jersey, however, it's only a disorderly conduct misdemeanor. In Missouri, it is only considered a felony if the services stolen are worth over \$150."

Another legal quirk allows mail-order houses to get away with selling cable decoders. According to Steve Bailey, "there are some local ordinances [in Grand Rapids, Michigan, for example] that require cable companies to allow their customers to buy their own converter/decoders, so long as they pay the monthly service fee." In other words, just as you can now purchase and own your own telephone as long as you pay Ma Bell for the phone service, there are places where you can own your own converter/decoder. The difficulty this raises for the cable company, of course, is in getting payment from all decoder owners.

To date, the major cable companies have had a modicum of success in prosecuting manufacturers of cable decoders and even individual pirates. The key to detecting illegal subscribers has been in discovering that a trap has been tampered with or removed. If a pirate never had cable before, he or she will often climb a telephone pole and hook up a line to his or her house; these illegal lines are also detectable. "The cable companies also hire students during the summer to go from house to house doing audits of the traps," says Dooley.

As for the moral issue of stealing pay TV, most pirates stick to their guns, claiming that there's really little wrong with what they are doing. "The average American can't afford \$40 or \$50 a month to watch TV," says Charlie Keith. "I think cable companies are being a little greedy." Ed Dooley dismisses that viewpoint, saying that "cable piracy is really not that different from shoplifting."

So the battle goes on. Pay-TV operators are working on various means of foiling pirates. Some microwave companies (including HBO) are considering scrambling their microwave signals, a move that would require pirates to somehow get their hands on microwave decoders along with their antennas and down converters. Many cable and STV systems have adopted addressable decoders—ones that can be shut off or altered electronically from the company central office. With these, a company could electronically render a decoder useless once a subscriber has discontinued service and would no longer need to worry that that decoder would wind up enabling someone else to receive free "pay" TV. Even still, in Buffalo, NY, recently, investigators from Prime Cable found that one decoder manufacturer has devised a way to defeat their addressability, already outsmarting the latest move against stealing pay TV. □

PAC ATTACK...

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Contradicting Zaret's case-findings is a study of users of cathode-ray video display terminals at the *Baltimore Sun* conducted by the National Institute of Occupational Safety and Health in '81. After giving eye examinations to users and to a control group that didn't use the terminals, the study found that users of video display terminals suffered more eye strain, more backache and had a greater number of headaches, but had no serious organic eye damage.

The most alarming findings on the physical effects of videogames, reported in the May/June '82 issue of *American Health*, grew out of studies on stress conducted by Dr. Robert S. Eliot of the University of Nebraska Medical Center. Certain persons, known as "hot reactors," have strong increases in heart rate and blood pressure when performing physical activity. Eliot found that hot reactors playing videogames underwent these same physiological changes, but, because all they were doing was moving a joystick, their bodies weren't burning off the catecholamines (substances produced by the adrenal glands) that had poured into their blood system. What happens, in this instance, according to Eliot, "is like drag racing a car with the brakes on. Your heart is pumping against dramatically increased pressure.

There is a limit to what that organ can do." Possible results: a stroke or a heart attack.

Without much more extensive research, it appears unlikely that the controversies surrounding videogames' psychological, educational and physical effects will soon let up. Even after 20 years of research about television, experts still have only a vague idea of what the tube does to us.

But, even with all the drawbacks psychologists and therapists have pointed out in today's videogames, many researchers have high hopes that tomorrow's games have the potential for tremendous beneficial effects. The DLM Company in Allen, Texas, for instance, has adapted many popular videogames to educational computer games in its Arcademic series. In *Meteor Multiplication*, for example, the screen looks nearly identical to the videogame *Asteroids*, but each rock has a multiplication question inside it; the player has to type in the correct answer or the asteroid destroys the spaceship.

Victor Walling predicts there will be videogames in which several people work together to achieve a common goal. He sees this kind of game as cooperative (whereas most of today's games are competitive) and as socially beneficial as opposed to violent.

Professor Gable, on the other hand thinks the most beneficial part of videogames is in their relationship to full-fledged computers. "We now have millions of game consoles out there representing tens of millions of dollars investment in advanced electronics technology and we have millions of kids spending hundreds of thousands playing with them," he says enthusiastically. "The potential to harness all this energy to a whole new world of electronic information is fantastic but we need to start moving kids into computer literacy." Gable sees this as a process of "upgrading" the nature of the game habit, of moving to checkers to chess": move the kids from joystick to keyboards and that will allow the player to begin programming events instead of just being the passive recipient of someone else's program."

By all accounts, it will be a good 10-15 years before substantial data about the effects of games becomes available. In the meantime, Surgeon General Koop will be weighing his dire visions of the videogame future with the reality of today's games before he decides to take any further action. Having been burned once, he will not likely take on the videogame makers again unless he's got the damning research in hand.

Until that research—both damning and praising—begins trickling in, the debate over the possible effects of one of America's favorite entertainment forms is sure to become more heated. □