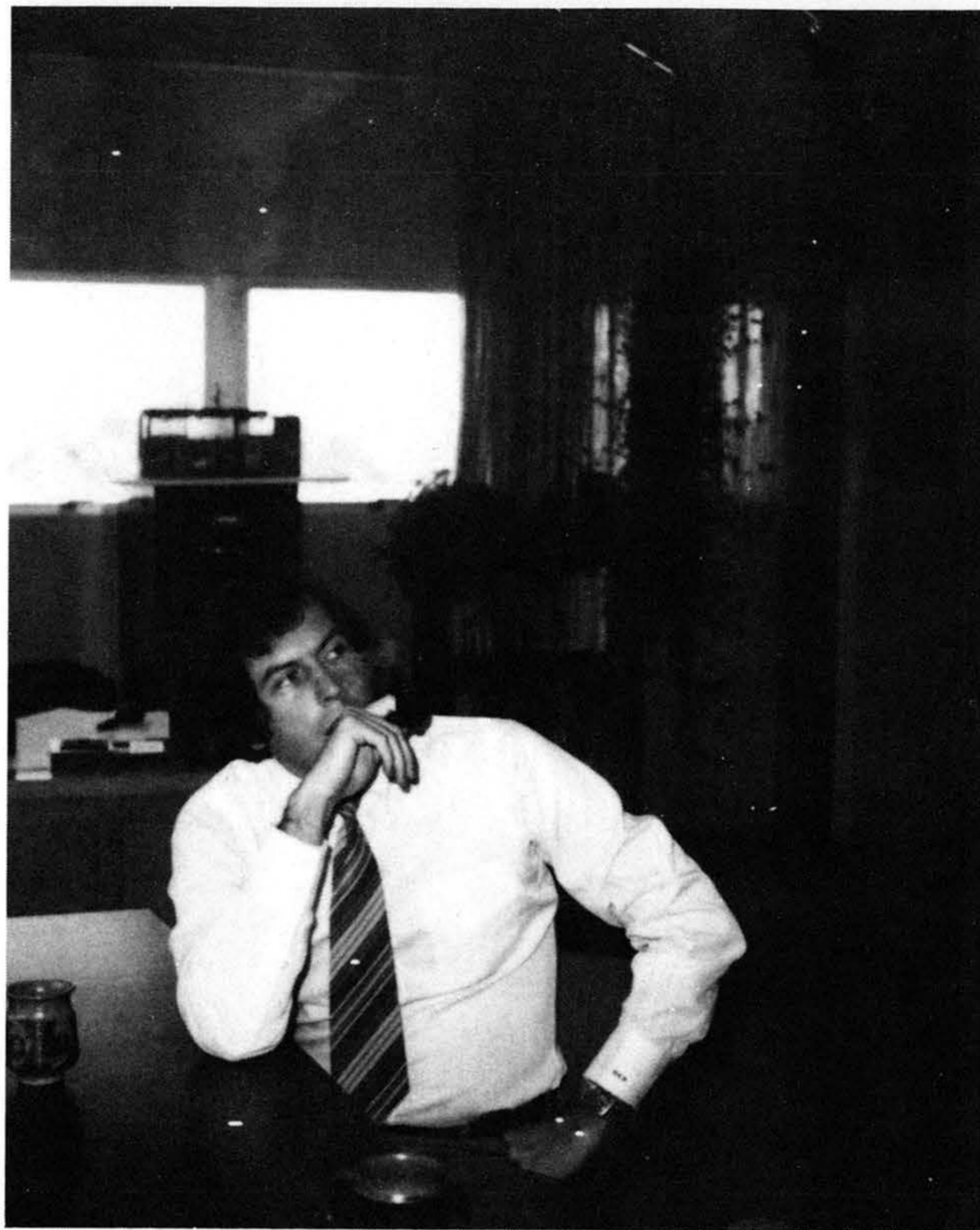


# Ponk, Ponk- the bouncing blip blitzkrieg

## A PLAY METER interview with Nolan Bushnell, board chairman of Atari.



"Some new merchandising methods are needed, possibly using tokens or pay-one-price or something like that, so that Johnny can spend three hours of action-packed fun in the game center and spend only five bucks."

In 1965, a University of Utah engineering student, who had put in some parttime work at a local arcade, decided amusement games needed to be zapped and he thought he had the proper zapper when he taught the university computer to play a few wierd games. The concept was born, but it wasn't until 1970 that inexpensive technology caught up with Nolan Bushnell, now chairman of the board of multi-million dollar Atari Inc., and allowed the computer prodigy to build what is generally regarded as the first feasible video game, Computer Space.

Originally, you see, it had been Bushnell's idea to program a small computer for various games and allow players to use video terminals located away from the computer. But the costs involved in that concept in the mid-sixties were prohibitive.

Bushnell waited and the cheap technology available in 1970 started him working on his old idea again. But then he discovered he didn't need the computer at all and that the game concept could be worked out with only a printed logic board.

Like all good pioneers, he tried to sell his idea to bankers, but like good bankers, they weren't buying. Which forced him to build Computer Space on his own and sell the rights to another company. He got a piece of the pie, but not what he felt he deserved. But now that his concept had been proven, he could proceed more or less on his own.

He began building Pong, the legendary video game that really launched the solid-state revolution in coin-operated games because of its relative inexpensiveness and its more easily understood play concept.

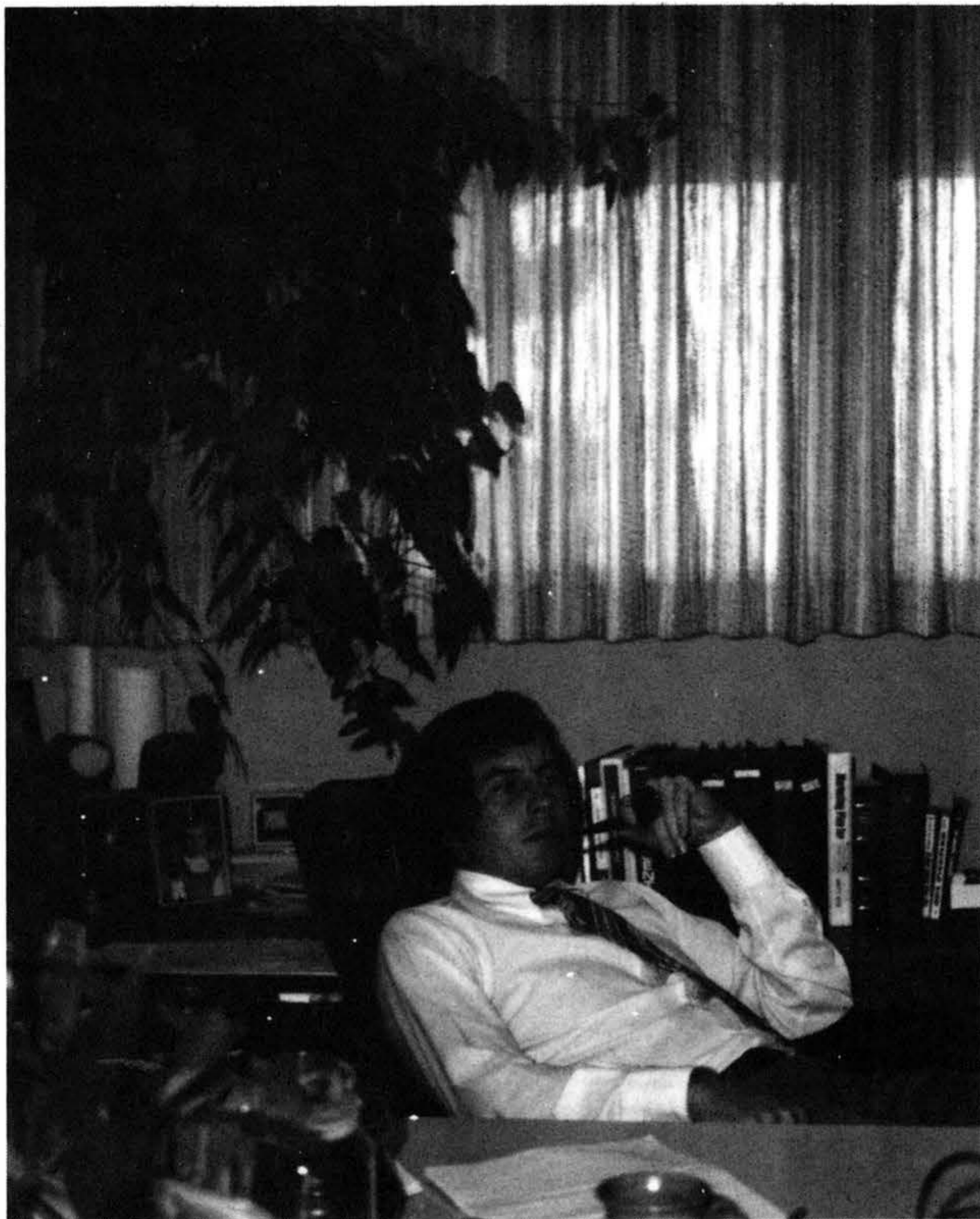
He had signed an agreement with Bally, however, and felt obliged to offer Pong to them. They refused it, though, because they didn't like the fact that it had no one-player mode and because they thought it needed video men instead of paddles, Bushnell says.

He went back to Los Gatos, where he founded his factory, disappointed. But Bally's rejection turned out to be a windfall for Bushnell's future. As he explains:

"We were still very small and very, very short on money, but at the same time we had produced a number of machines and sold and placed them ourselves. They earned fantastically and word spread locally among the operators, who spread the word to their distributors."

The word mushroomed and Bushnell was able to borrow against orders from three distributors to put his firm into business. From then on it has been well-known history. Atari produced not games, but amusement concepts, continually trying to live up to its image as the pioneer of electronic games with Bushnell's eternally optimistic frame of mind at the fore.

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*"Even if we'd do repairs for free, if an operator has a game down for two weeks, it will cost him more than any repair costs. So, that's really why we want the distributor...and the operator to have a repair capability."*

*Knowing of his farsighted reputation, we asked him what he felt the future holds for the industry he chose to revolutionize.*

**PLAY METER:** Do you think we've scratched the surface as far as the games go?

**BUSHNELL:** Yes, we've scratched the surface, but, gee, there's so much left to do that it staggers the imagination.

You see, we're just seeing a situation where the coin machine industry is just starting to scratch the surface of what I'd call marginal acceptability. There are still many, many people who equate coin machines of any form with gambling. An awful lot of people look at it as an unsavory diversion that our children do. There's an awful lot of what I'd call bad image.

But it's turning, changing. Statistics that we've done show that presently, less than two per cent of the country's population represents coin machine revenue. That's almost insignificant. That means our players are a very small segment of the population.

**PLAY METER:** That's an interesting way of looking at it.

**BUSHNELL:** So, what we're striving for is to jump that to four per cent. When we get four per cent contributing 90 per cent of the revenue, we've doubled the size of the coin machine industry.

**PLAY METER:** How do you do that?

**BUSHNELL:** Well, it's almost happening by itself. There are beginning to be more coin machines in the mainstream of life. There are an awful lot of people who have never gone into a beer bar in their lives, never gone to a bowling alley in their lives and probably never will go to either of those places in their lives. And many of them are nowhere near an amusement park and if

they are, they think they're there to ride the rides and not go into the penny arcade.

But what do we do? We put them in hotel lobbies. Maybe that's another .01 per cent. Airports, too, but there are still many people who don't go to hotels and don't fly; people who are not making over \$10,000 a year family income. They have money to go to movies, but they don't do much more.

That's where the new, small regional games center plays a part. The biggest problem there is who is your competition. Where are they spending their leisure dollars? You're competing against the small restaurant, hamburger joint, drive-in place or movie house.

**PLAY METER:** How does an arcade go about competing against a well, drive in restaurant or movie house?

**BUSHNELL:** Let's take another look at the coin machines in a typical 30-piece arcade. You'll find, usually, that there is a tremendous amount of assets that are idle a good deal of the time. Your assets in a good location are maybe alive 10 per cent of the time.

So okay, Johnny's taking his girl out for a date and he can see he can take her to the movies and spend five bucks. Well, in the typical quarter arcade, five bucks isn't going to last very long and Johnny wants to be able to entertain his young lady for three or four hours.

Some new merchandising methods are needed, possibly using tokens or pay-one-price or something like that, so that Johnny can spend three hours of action-packed fun in the game center and spend only five bucks. If you work through the mathematics, you'll find there's plenty of machines there; it's just how do you figure out how to funnel him to different machines so that there aren't long lines behind any one game. Maybe you give him 100 tokens for five bucks or three bucks and schedule how many tokens it will take to play certain machines based on demand. In other words, perhaps it takes five tokens to play a Tank, but only one to play a Pong.

**PLAY METER:** All of what you said seems to make sense.

**BUSHNELL:** This way Johnny can see that if he spends his tokens stingily, he can maybe spend five hours in there and you're just as happy because he's playing machines that would have been idle anyway. Plus, now you can compete.

**PLAY METER:** Have you tried that yet?

**BUSHNELL:** We have a pilot program in the works right now. It's the old idea of management promotion; how do you generate traffic. Perhaps, we have the best possibilities because we don't have to give pizzas away to get people into our joint. We can give a few games away.

When you think about the typical amount of promotion that goes into nickel and dime items for sale that don't have near the margin that coin machines do, it's a sin that our operators aren't getting off their ass and running it like a sophisticated business.

The biggest problem we have is the fact that it's been a good industry for so long that we haven't had to work to make a buck.

**PLAY METER:** That seems to be what happened with the booming video cocktail table market and the way blue-suede-shoe men jumped into it. What are your feelings about the tables and about the marketing

methods controversy?

**BUSHNELL:** I think it's been good for the industry because it's got a lot of operators off their ass.

**PLAY METER:** In what way?

**BUSHNELL:** Operators have somehow gotten the idea that their areas are fully saturated. You know, I've talked to guys so many times and their idea of going after a location is going to a place that's already got games and trying to buy it with a checkbook.

A lot of these guys, if you'd have told them to go into a nice cocktail lounge, they'd have told you no chance.

We tried to sell cocktail tables clear back when and were singularly unsuccessful through our regular distributor organization. It was just a thing that nobody was ready for. We ended up building and selling some in Tokyo as early as mid-1973. The operators over there were a bit more aggressive and did rather well with it. But we could get no interest whatsoever in the states.

So, we were approached by National Entertainment and we said, "Sure, we'll build you a cocktail table." They went out, beat the bushes and placed the tables on location and suddenly you had operators scrambling around, trying to protect their locations, trying to buy cocktail tables. Not because they wanted to, not because they thought it was a good idea, but to sort of protect their down side.

Then they started collecting their money out of the things and found out they were making money. But that would have never happened had it not been for the suede shoe guy. You can see it happening still today. The suede shoe guy is hitting hardest right here in

California and that's where the cocktail table run was in the last six months. Now they're pushing East and suddenly, you see demand spring up in the East.

**PLAY METER:** Does Atari plan to do something in the cocktail table market?

**BUSHNELL:** Yes. We've got our first table--I should say our second run of cocktail table games--coming off the line June 25, called Goal Four. We modeled it after our successful World Cup game that we're marketing in Europe.

**PLAY METER:** You don't think it's too late to be jumping into that market?

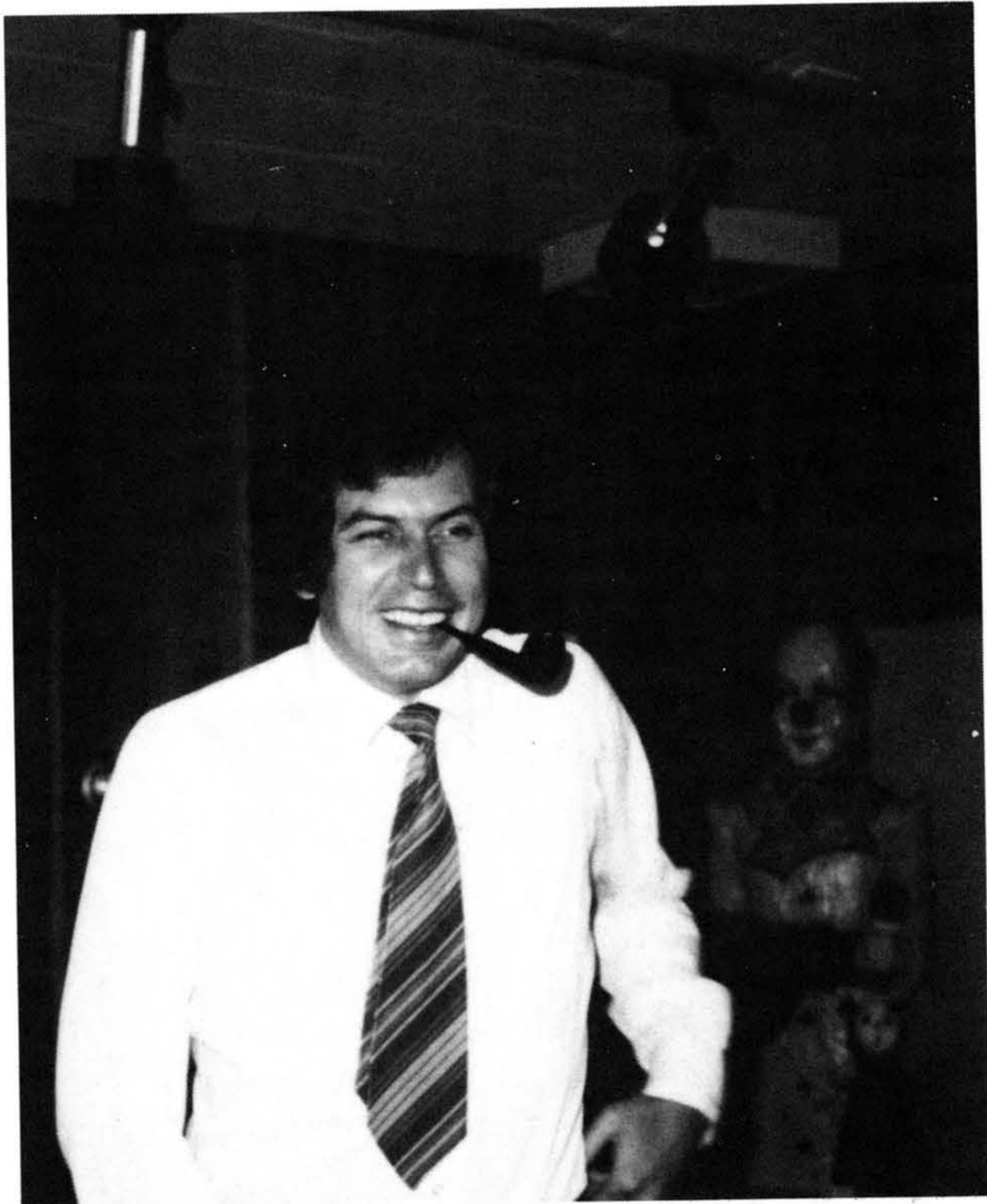
**BUSHNELL:** Not at the price. The game's good enough to stand on it's own.

**PLAY METER:** Now that we've talked a little about the future and the present, let's get back to the past. Why was there such a small monitor on the Pong in comparison to later games?

**BUSHNELL:** Remember, we were scientists at the time and we knew perhaps too much about the human eye and about the right way to do things.

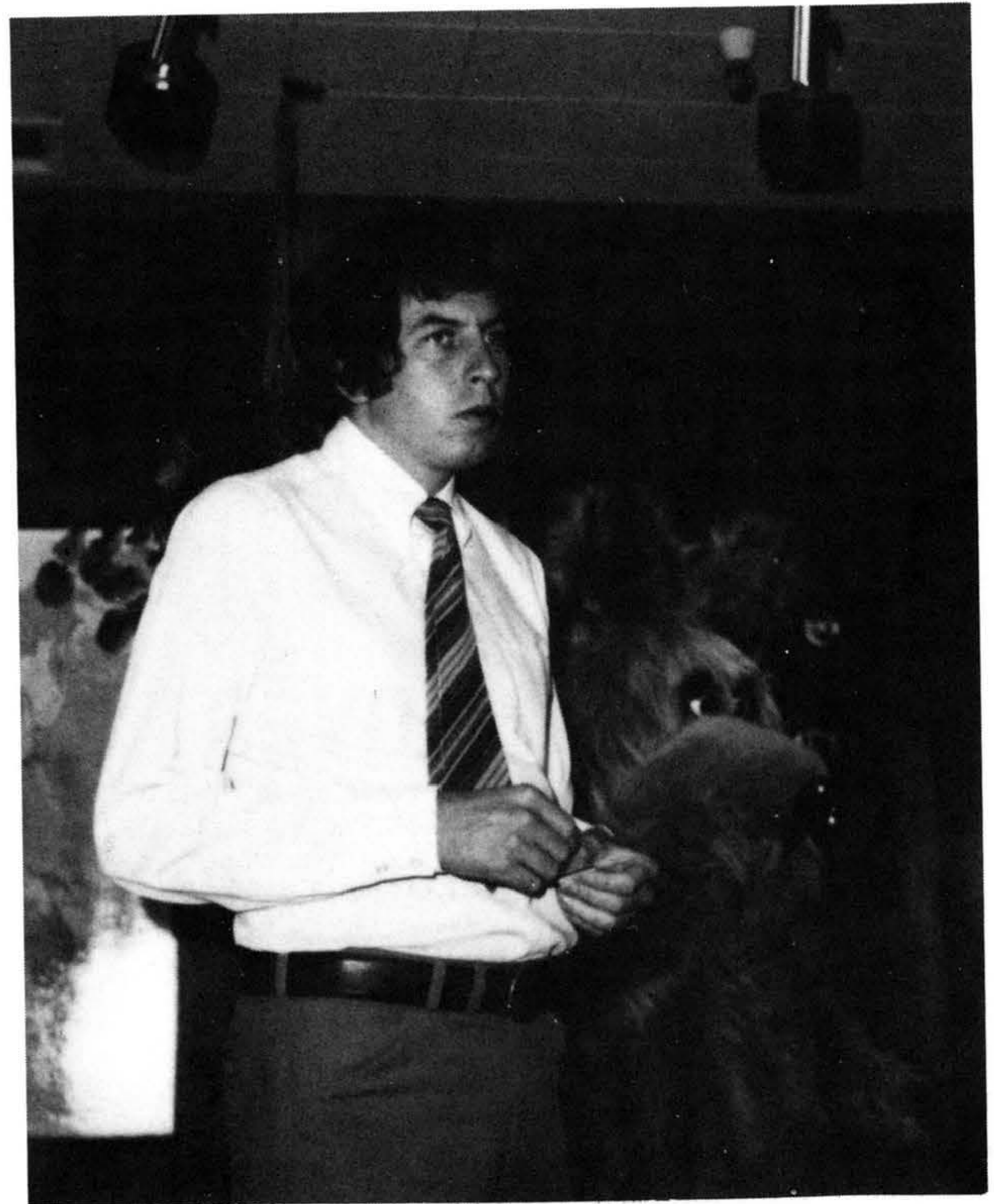
When you're standing right on top of a monitor, it's generally undesirable to see the line structure on the screen. It's been shown to give people headaches and all the other things that tv does. A smaller monitor, the 12-inch, turned out to be the largest size in which the line definition becomes somewhat obscure. Also, when you're standing that close, you don't have to move your head. It becomes an eye motion, which is much more pleasing and comfortable.

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**PLAY METER**



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Technically, the small monitor is better in terms of the player and everything else. It was only reluctantly that we changed to the bigger ones because you have more reliability problems the bigger you go, the energies that are involved are worse. There are lots of problems with the bigger monitors, but it appears that the big gaudiness attracts people, which ultimately pushed us into the bigger ones.

**PLAY METER:** Okay, Pong was in production and, as we all know, took off like a rocket in all parts of the country. And then, competition set in, right?

**BUSHNELL:** Right. I guess to go along with that a bit further, the first test location we had was a place called Andy Capp's Tavern. One of the owners of the place also happened to be the financial vice-president of Ramtek, so he evidently saw some of the earnings reports...

**PLAY METER:** And Ramtek at that time was just an engineering firm?

**BUSHNELL:** They made display terminals for the medical instrumentation market.

**PLAY METER:** They weren't in the games field at all, but they were in a related field so that they could easily give you some competition if they wanted to and saw the potential?

**BUSHNELL:** They saw the potential, saw how much money we were making and started a reverse engineering thing on it. I guess at the same time, Allied and a few of the folks heard it was doing well and they understood there was this tiny California company that had a great product and they ought to jump on it.

I don't think any of them realized how fast we could

get our production up. We were up to about 1,000 a month in February and March of '72. At the end of March, Ramtek hit the market with theirs. And by April, we were banging them out at darn near a hundred a day. I guess by June the market was pretty well filled with single paddle games.

Then we introduced Space Race. Ran it for a couple of months. Then came in with Pong Doubles.

**PLAY METER:** Pong Doubles, although it was very good, disappointed a lot of people because they felt it obsoleted their two-player game.

**BUSHNELL:** That's right.

**PLAY METER:** Which caused the first big rage among the operators...

**BUSHNELL:** You see, we were really forced into Pong Doubles.

**PLAY METER:** Because of the competition?

**BUSHNELL:** Yes. We weren't planning to release Pong Doubles until the following spring and Allied came on with their Tennis Tourney. Like you say, I felt it was necessary for the operators to get more earnings out of their Pong singles before they jumped on top of Pong Doubles.

I try to think of it as the common cash box theory; that is, there's so much money out there that's going into games and manufacturers get a certain percentage of that back. But only a healthy operator can make a healthy distributor can make a healthy manufacturer. So we always try to make sure our products don't obsolete ourselves; that is, let's make something that will give incremental earnings, rather than earnings at the expense of other machines.

Quite frankly, we had a plan that Pong Doubles wouldn't have come until the following spring. We had two other games that we were willing to slate in after Space Race and we chose Space Race simply because we felt that that would definitely not compete with Pong because we knew Pong was primarily an over-16 game, where Space Race was aimed at the 8-14 age bracket.

**PLAY METER:** How do you explain the poor resale value of Pong?

**BUSHNELL:** Just too damned many of them on the market. It's just a thing that with each of the new games that come out, a certain number of the older paddle games were displaced.

What really happened was that because of the reverse engineering process so many people jumped in on top of Atari with their version of the paddle game that by the time they hit the market, there was no market left. So the manufacturer started cutting prices to move inventory. Then the distributors were stuck with inventory so that they had to cut prices. And the operator was left with a deflated piece of equipment.

What also happened is people just plain got carried away with the hysteria of the game and bought too many of them. Instead of having the possibility of moving the Pong game from location to location, by the time the bottom fell out, there was one on every location. so where do you go with them? Nowhere, except to your warehouse.

I also really have a hard time accepting copying of any form. What it really does is it destroys earnings on almost all levels. What you're doing in copying, even in reverse engineering a product, is spending a lot of engineering costs that has to be paid for somewhere.

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And it ultimately has to be paid for by the operator. That's engineering money that could be spent just as easily in designing a new game and that represents industry growth. Redesigning an old game is money down a rat hole if you look at it through the common cash box theory.

Secondly, limited production on any piece keeps your resale up. It keeps the demand up.

**PLAY METER:** I can understand how you can keep your production limited, but how do you keep Joe Blow Manufacturing Company from copying you and flooding the market?

**BUSHNELL:** You can't. See, that's the whole thing. If the operator would get used to not buying copies, they'd end up with more earnings in the long run.

**PLAY METER:** Why do they buy copies in the first place?

**BUSHNELL:** I really don't know. I think it's shortsighted on their part, but they do it. There are certain operators who have a company loyalty and I can accept that, but I think they're cutting off their noses to spite their faces in continuing to do so. I think it's stupid.

**PLAY METER:** I know that's a big problem in this industry. As soon as somebody comes up with an ingenious idea, every other manufacturer in the country has the same game out in a month.

**BUSHNELL:** Right. We could have really saturated and built probably an extra 3,000 more Trak 10's and Gran Trak's than we did. But we chose not to and right now you can't buy a Trak 10. They're selling for within \$100-\$200 of what they sold for new. From the kind of earnings they make, that represents a very nice protection of the operator's investment.

**PLAY METER:** Why didn't everybody copy Trak 10?

**BUSHNELL:** Because we had a awful lot of sophisticated electronics and custom circuitry that, quite frankly, was very difficult to copy. We've learned a lot of things about what to do to make a game copy-proof. It was a thing that a garage shop just couldn't do it economically without a run of three or four thousand.

**PLAY METER:** Yet, Kee Games did.

**BUSHNELL:** Well, Kee Games bought a license from us. Besides, I owned a piece of it at that time.

**PLAY METER:** How did the joining of Kee and Atari come about?

**BUSHNELL:** It was a situation where some guys thought they had a better solution--some of them had worked here--and they thought they'd go off and do their own thing. They were going to compete against us anyway and we had some extra money, so we felt we might as well own a piece of our competition if they're going to be there anyway. We thought there was a need for another factory at the time, too.

**PLAY METER:** Did you have ideas then of acquiring them or being acquired by them?

**BUSHNELL:** Yes, I did.

**PLAY METER:** It worked out very well then?

**BUSHNELL:** Yes, it did.

**PLAY METER:** But it did cause some resentment on the part of some distributors in other parts of the country who were proud to be Atari distributors, but who the next day came face to face with a Kee distributor across the street, or down the block. They

were no longer exclusive distributors, so to speak.

**BUSHNELL:** That's true, but I really think that the overall strength of all marketplaces were helped by it. And they're really a very valuable part of the Atari company right now. Quite frankly, Tank has been a fantastic product. I really think that any of the Atari distributors that would have been cut out if we hadn't acquired them (Kee) would have been very uncomfortable.

**PLAY METER:** While we're talking about the old games, let's talk about warranties and repairs. I remember the older games had warranties of up to a year. What do they cover now?

**BUSHNELL:** It's essentially a 90-day warranty. What we're really warranting now is what we'll call factory defects, rather than wear and tear. What's happened is that the cost of administering a warranty is extremely difficult because there's just an awful lot of guys who'll do everything in their power to screw you over. What it ends up doing is penalizing the honest operator because you have to put such rigorous controls in it and you penalize the operator who wants to develop his own capabilities.

What we did was to take a lot of our money out of the warranty program and spend it in field service seminars and the like, saying that what we really want to do is build a field service capability rather than a huge factory repair service capability because that's really where the money will be saved.

Even if we'd do repairs for free, if an operator has a game down for two weeks, it will cost him more than any repair costs. So, that's really why we want the distributor to have a repair capability and want the

operator to have a repair capability. And we believe that they can be developed and we plan to develop it.

**PLAY METER:** Do you ever foresee the availability of spare parts kits containing plug-in replacement IC's for the PC board with the operator being able to call the factory, tell them what's wrong with the machine and the factory telling him which chip to replace?

**BUSHNELL:** Absolutely not.

**PLAY METER:** Why not?

**BUSHNELL:** First of all, any time you've got a socket on a board you diminish the reliability of the mechanically linked electrical connections beyond that which Atari demands of its equipment. No matter how good the socket, no matter how good the connector is, mechanical vibrations, mechanical problems, and things like that...

**PLAY METER:** In other words you're opposed to a replaceable, socket-type IC chip and favor every IC being soldered into place.

**BUSHNELL:** Absolutely.

**PLAY METER:** Are there any companies that use the plug-in chips now?

**BUSHNELL:** I think there are some that tried it and I think they all came to the same conclusion.

**PLAY METER:** How do you then plan to overcome the problem of not worrying about the service problems in your factory, but to educate the operator and the distributor?

**BUSHNELL:** The soldering iron is the magic tool. You know, teach operators how to solder; it's not that tough a thing.

**PLAY METER:** Well, how do they find out what to solder?

**BUSHNELL:** Through our service manuals and our service schools. We have the equipment and test fixtures available now to allow in-shop repair and cut down time to one-day turn-around.

But I think you'll find right now there are many operators who have 100 per cent in-house service capabilities and that number is growing much more rapidly than you'd believe. And whereas, two years ago almost no distributor had in-house capabilities, every one of Atari's distributors now have in-house repair capabilities and can fix better than 90 per cent of the problems.

**PLAY METER:** We were talking about the Pong games and the saturation point that was reached and we've noticed recently a big surge in interest in conversion kits. How do you feel about seeing your old Pong games being changed into something else?

**BUSHNELL:** If it's really, seriously good for the industry and if Pong games really don't have value as you say, then a conversion kit makes sense.

But it's my feeling that if you really put a paper and pencil to this thing, an operator really isn't saving a dime by doing a conversion. It's costing him money that is really throwing it down a rat hole.

**PLAY METER:** Why? Suppose a guy could convert an old Pong into a Tank, let's say, for \$500 and give the operator a game that'll earn his \$200 a week. What do you say to that?

**BUSHNELL:** First of all, I don't think he could get a conversion unit into a Tank for \$500. But if he could and looking at the cost involved in Tank's computer, any company that's going to build like a Tank board and sell

it to a guy that's got an old \$200 Pong, what's this guy really saving.

He's got an old, worn out cabinet that looks like crap. He's got to change the control panel because it's not sloped the right way and needs different pots. People walk into the bar and see that it looks like an old Pong and they're not sure there's something new in it or not. He's probably got an old coin mechanism and an old monitor that are going to give him a service problem.

By the time he's through converting, he's maybe saved 400 bucks, maximum, and he's got a product that looks worse, isn't going to earn as well, that's going to cost more in service calls. He's got a game that's bound to go down more because you have to figure a conversion unit is not going to be as good as the factory's new piece. He's also saying that the Pong game itself had zero earning capability and I say you can put a Pong game anywhere and it will earn something. He's also got an old, uglier game that's not going to give the resale value he could have obtained from a Tank he bought new. When you really put a pencil to it, he's really lost money. I think it's dumb.

**PLAY METER:** I think you have to look at it from his point of view, too. Where it's sitting, it's not earning him one red cent and he's probably depreciated it already.

**BUSHNELL:** If his old Pong game is really not doing him any good, I really think he'd be better off dumping it into the bay or giving it to his church. Really. All you have to do is sit down with a pencil and paper and look at the two alternatives over a two-year period and I think you'll find that the conversion of that \$200 game is going to end up costing him a grand.