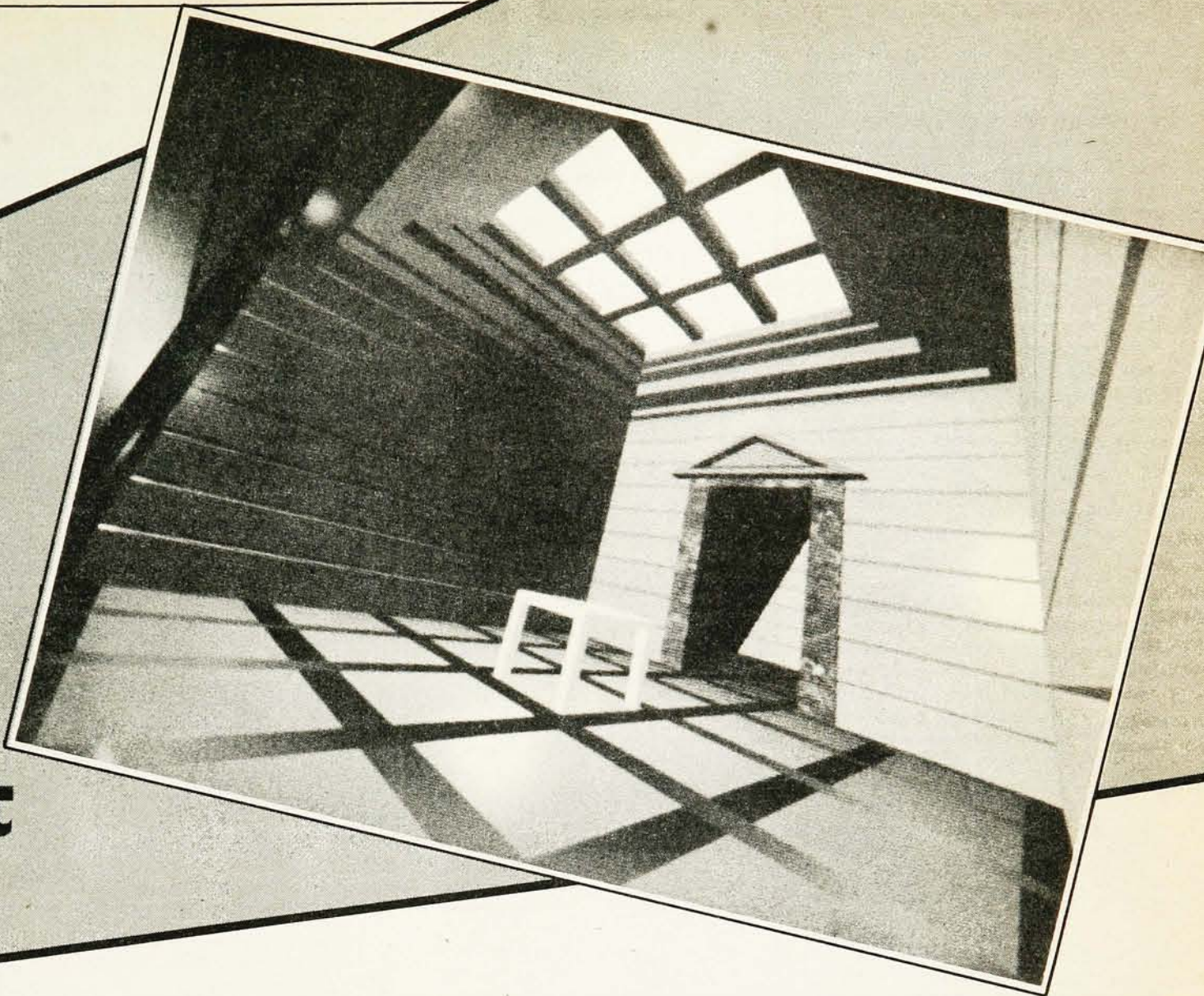


Catherine Richards and the Images Without Light



• The image maker of tomorrow – no lights, no camera, no action – Catherine Richards

by Maurice Alioff and Susan Levine

At the end of a seemingly endless corridor in the CBC's Montreal Engineering Headquarters, there's a room crammed with TV monitors, VCRs, and chunks of other hardware. One of the monitors flickers to life, and we swoop through marble arches into a twisting, turning salmon-pink corridor. Our point-of-view shifts frequently and rapidly. We skim above the floor; we look down from the ceiling until suddenly, we find ourselves in a room somewhere in a maze.

In this room, two young men are sitting at a table, playing a strange game with a couple of coloured balls. To the accompaniment of rhythmic chanting, space seems to shift and flip – and we drop through the table, finding ourselves careening again through the marble arches into the pink endless corridor. We're in another loop of the maze.

The two young men and the table, which were recorded by a video camera, are real. Everything else in *Le Game*, a CBC feasibility project, is synthetic, constructed in the memory of a computer. The project doesn't only demonstrate how video images can be combined with computer-generated images. It does this using the point-of-view of a moving camera and its continually shifting perspective. In the near

future, this kind of technique might become as routine as synchronizing film sound and film picture on an editing table. Already, Canadian and European producers have expressed an interest in the results, and the CBC is continuing the research.

There's clearly an unlimited potential for what Catherine Richards, project director and senior consultant on new imaging systems for the CBC's Strategic Engineering Department, calls "images without light." Documentary productions can use digital imagery to visualize complex social and environmental problems, like the effects of acid rain on a countryside. Dramas, ballets, and operas can use it, for example, to create artificial sets. One day, a real Hamlet might be seen roaming through a synthetic palace of surprising and fluid proportions, past rich tapestries woven out of bits and bytes.

Richards points out that scientists are the ones who are giving us an insight into a significant use for computer-generated images: "They are visualizing a whole range of subject matter that is impossible to capture with cameras. We are looking at what they are doing, because they understand how to visualize concepts, complex processes, and invisible phenomena." Structures such as the D.N.A. molecule, or processes at the cellular level – like intricate changes in the composition of bodily fluids – are expressed in all their shifting complexity by the new technology. The work that is being done in the sciences could,

according to Richards, "have a powerful effect on television news and information dissemination." One can imagine visualizing the impact of unemployment on an entire town – its stores, schools, banks, and various groups of people – in a way that would deepen public understanding and raise the level of debate on the issue.

The increasingly widespread use of cameraless images anticipates, according to Richards, the coming of a new medium that is not dependent on either film or video. "Like most new media," she says, "it tends to creep up behind us. We are experiencing its preliminary fragments. A video game is a familiar example for many people, who are now able to direct themselves through its synthetic space. In the future, we will be guiding ourselves through more sophisticated information or entertainment spaces."

Listening to Richards, one begins to imagine new kinds of experiences and sensations in artificial environments that seem psychologically, and even physically, very real. "We will," she says, "be directing our own point-of-view as well as our apparent motion. We won't sit back – as we now do in the theatre and in front of the television – while a director controls where, what, and when we can see."

As we make choices and call the shots, the images we encounter will be just as active. "Increasingly," Richards explains, "the media will appear to be an environment that reacts to us. It will follow various ways that we interact with a program, such as our gestures,

our temperature, language, as well as the keyboard, and will change the program accordingly." The idea of such complex interaction provokes all kinds of speculation. Perhaps we will enter spaces that are like thoughts – and play with them as if they were chess opponents. Perhaps the new medium will allow us to interact with the characters in classic films, or completely re-edit old movies and create new ones. Like certain experimental theatre companies, some experiences will make demands on the spectator. He or she will pursue the solution of a mystery, become an accomplice, or a hero. Perhaps there won't even be a screen.

Every new medium invents its own creators, and Richards feels that film animators, as well as painters and sculptors, are the kinds of creators the 'images without light' require. "They think in terms of *constructing* images. They have skills that are difficult to learn from photography, film, and video... As far as the technology goes, the tools are becoming simplified. You certainly don't have to be a computer scientist to use many of them." The evolving new medium has already produced people with inter-disciplinary backgrounds that would not have been seen ten years ago. Unfortunately, there aren't enough research and production projects in Canada, so many talented individuals leave the country and are hired by people like George Lucas. "This could," says Richards, "have serious repercussions for future Canadian development of these new technologies."

Susan Levine is a filmmaker who lives in Ottawa. Maurice Alioff teaches film and literature at Vanier College in Montreal and writes screenplays.

Despite the present dilemma, Richards is optimistic. "Canada has always had a sixth sense when it comes to picking up on new communication technologies. If that historical tendency is correct, my guess is that we will create a new institution in 15 years to respond to the new communications environment, as we did earlier with the CBC and National Film Board" In fact, one can see the visualizing power of this new technology in the context of a Canadian documentary tradition. The visualization of concepts, structures, processes, and invisible phenomena extends the documentary aesthetic. This kind of aesthetic emotion, as Umberto Eco has explained, is felt from communication that gives ideas and data to think about, decisions to make, conclusions to draw. You might say this medium is made for us."

The success of Omnibus, a Toronto-based computer animation company that designs **The Journal's** graphics, and has bought several large companies in the U.S., is an encouraging sign. The work that Richards herself has been doing is another one. Since the completion of **Le Game**, she's been setting up further interdisciplinary projects with computer graphics research labs across the country. People from the technical and production sides of television, as well as robotics and artificial intelligence, will collaborate. She emphasizes that "these projects will have actual production objectives in mind, and that's what makes them unique."

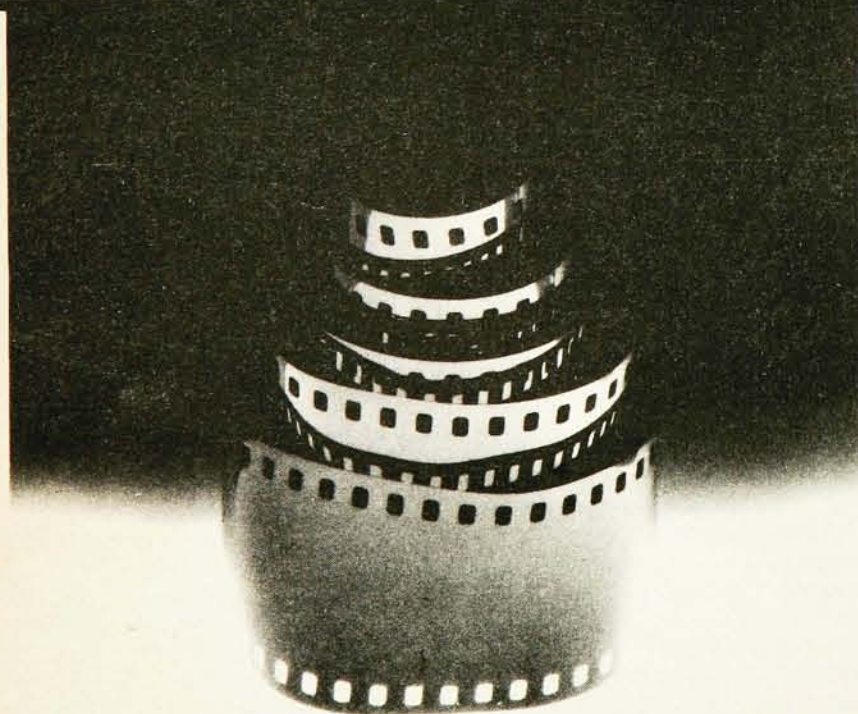


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photo: Angela Grauerholz

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