



# Polaroid's Experiment in South Africa

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Fifty years ago this month, the high-profile U.S. photography and optics firm attempted to take action against apartheid. The project's mixed results—and some details behind the story—remain relevant a half-century later.

**T**he death of George Floyd at the knee of a police officer in Minneapolis, MN, USA, in May 2020 was a watershed moment in race relations, both in the United States and internationally. The overwhelming public response was outrage at the perennial injustices suffered by citizens of color. Many viewed the officer's actions as a defilement of the nation's promise of equality to all citizens, and called for increased scrutiny of both overt and hidden bias—in law enforcement and in society at large. In response, organizations large and small, aware of their own hidden behavior, issued statements expressing their support for inclusion, diversity and representation in their workplaces.

Professional societies, including The Optical Society (OSA), also issued such statements of support. But the potential of outward support subverted by hidden bias leads to a provocative question: Has the optics community created hidden or unacknowledged barriers to advancement for individuals who are not white, middle-aged males? Finding and documenting evidence of hidden bias—in effect, proving the negative—takes considerable effort and requires the expertise of historians of science and technology.

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Facing page: A policeman checks the identity card of a Black citizen under South Africa's Pass Laws, which controlled the movement and employment of the country's Black South Africans until 1986.

Central Press / Getty Images



A photo of Edwin Land, demonstrating an early version of Polaroid's instant-photography system. Land's technical accomplishments, intelligence and self-education (he dropped out of Harvard University at age 23 to form what became Polaroid) are the stuff of legend. After his death in 1991, *Optics & Photonics News* devoted its entire October 1994 issue to his contributions to science, technology, national defense, and policies connecting all three. Not a single article in the issue addressed Polaroid's Experiment in South Africa during the 1970s.

Polaroid Corporation records, Baker Library, Harvard Business School

As one step along that road, this article looks at Polaroid Corporation's "Experiment in South Africa"—an initiative announced exactly 50 years ago this month, aimed at improving conditions for nonwhite workers repressed by South Africa's apartheid rule. The experiment was triggered by protests led by Black employees within Polaroid, which led to the formation of a Polaroid Revolutionary Worker's Movement to pressure the company to take action. Edwin Land, the legendary cofounder of Polaroid and an OSA Honorary Member, took a personal interest in the Experiment.

On its surface, the mixed outcomes of the Polaroid Experiment exemplify the complexities organizations encounter when they turn words into action, and when internal priorities clash with external perceptions in efforts to combat overt examples of racism and oppression. Yet a revealing postscript to the Experiment also highlights how easily technology design can and does come to embody the implicit biases of society at large—a topic with new urgency as the biases baked into AI and optically enabled technologies such as facial recognition become increasingly evident.

### A complex record on equity

For some perspective on Polaroid's response in the 1970s to the Polaroid Revolutionary Worker's Movement, and on the development of the company's Experiment in South Africa, it helps to examine its posture toward issues raised contemporaneously by

its female and Black employees regarding the firm's practices in the United States.

Polaroid's reputation in the 1960s as a desirable place to work was due in part to its generous benefits package and its hiring practices, which were seen at the time as progressive. Some documentation of Polaroid's efforts to train and hire minorities into professional positions appears in the judge's ruling on a discrimination suit brought against the company, which alleged that Polaroid had used race as a deciding factor in determining which workers to let go in a 1974 layoff. Deciding in Polaroid's favor, the judge held that seniority, not race, had been the key factor. To underscore Polaroid's commitment to promoting minorities, the judge stated:

Polaroid recruiters regularly visited black colleges and advertised for black professionals who were seeking advancement. The management encouraged a committee of black workers to express their views of the company's personnel policies with respect to minority employees, and when a group of black professionals resigned, instituted a study to find out the reason. It has maintained a technical training program for black people in Boston called Inner City. This program continues to train black people and place them in local industries, not necessarily Polaroid. It is, however, entirely financed by Polaroid.

The court's ruling documents—from an outside perspective—Polaroid's apparent commitment to advancement of Black and minority employees. It does not, however, provide insight into the work environment, the establishment of these programs, or their acceptance and administration in the company.

These realities are more evident in how Polaroid engaged its female employees. The company's

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commitment to hiring women into professional positions was rare for its time, but issues unique to their employment were not. After an article appeared in the company newspaper highlighting problems faced by women in dual-career families, female employees began meeting on their own in 1969. The informal meetings spawned three different women's groups that communicated grievances and sought change at Polaroid.

Polaroid's attitude at the time is best stated in a case study of the company's equal-opportunity practices, published in *California Management Review* in 1978. "Polaroid's management had not ignored the unrest among women in the company," the case study noted, "but neither had they seriously dealt with them as a group subjected to discriminatory practices." It took two years for Polaroid to recognize this deficiency and, in 1971, to appoint a manager as liaison between management and the women's groups.

The women's groups organized five task forces to address individually the status of women in Polaroid, corporate policies, company practices, educational awareness, and company compliance with equal-opportunity legislation. The task force's efforts yielded an affirmative-action plan that the women presented to Polaroid in May 1972.

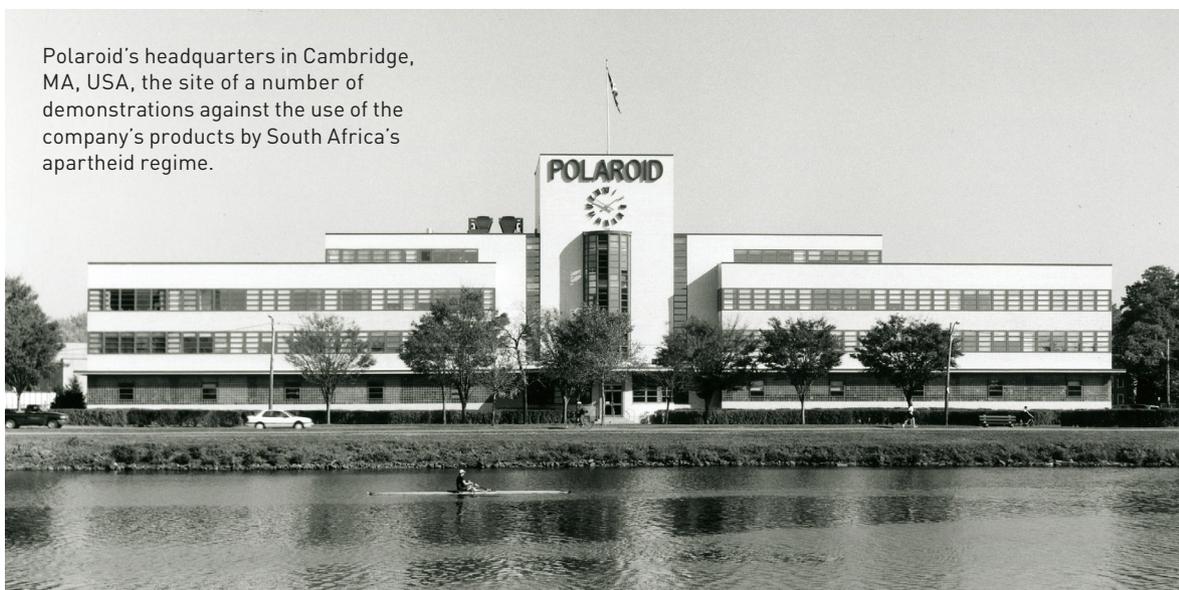
Polaroid initially rebuffed the plan but reversed itself two months later—for obvious and ignoble reasons unrelated to the substance of the issues the women had raised. The U.S. Office of Federal Contract Compliance had informed Polaroid that, without specific goals and timetables for implementing new federal regulations on equal employment, the company's status as a federal contractor was in jeopardy. Adopting the women's plan maintained its contractor status.

The 1978 case study noted that Polaroid's "commitment to an affirmative action plan was accomplished, not through management initiative, but through a combination of internal and external pressures." Nonetheless, the study also noted that Polaroid exhibited three characteristics of positive corporate responsiveness: "cognizance of the issue, commitment to response, and implementation of action."

### A troubling connection with apartheid

These three characteristics were also evident in Polaroid's establishment of its Experiment in South Africa—as were its reactive, not proactive, response to internal and external pressures, and its self-conscious desire to balance a moral stance and profits.

Polaroid's headquarters in Cambridge, MA, USA, the site of a number of demonstrations against the use of the company's products by South Africa's apartheid regime.



FayFoto/Boston



Members of the Movement for Colonial Freedom and the Black Sash Movement march to South Africa House to deliver a memorial to Prime Minister Strijdom of South Africa.

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In 1970, two Black Polaroid employees, photographer Ken Williams and chemist Caroline Hunter (who later married), discovered that Polaroid's ID-2 system for creating instant identification cards was an enabling element in the "Passbook" program in South Africa. Under the program, Black South Africans were legally required to carry their Passbook at all times; if caught without it, a person could be immediately detained and held indefinitely.

Although Polaroid's technology was not the only one being used for such purposes, Williams and Hunter were troubled by Polaroid's association with the program. Williams met with Polaroid executives on 6 October 1970, and on the same day the company released a memo to employees stating, "Polaroid has not sold its ID equipment to the government of South Africa for use in the apartheid program."

Unsatisfied with Polaroid's response, Williams, Hunter and others formed the Polaroid Revolutionary Workers Movement. The next day, 7 October, the Movement posted flyers at the Cambridge headquarters protesting Polaroid's association with the South African government. Polaroid once again reacted immediately, releasing a memo the same day clarifying that "Polaroid has consistently refused to sell the ID-2 Identification system directly or indirectly to the government of South Africa or any agency of the government for use in implementing the apartheid program."

Polaroid's claim that it had not sold its equipment indirectly to the South African government is suspect. With no facilities or employees in South Africa, Polaroid used another company, Frank and Hirsch, as its local distributor.

Still unsatisfied, the Workers Movement called for Polaroid's complete divestiture from South Africa at a rally in front of the Polaroid building on 8 October. The rally was covered by news organizations, including newspapers from several Boston universities. A second protest on 27 October, calling for a worldwide boycott of Polaroid, drew nearly a thousand participants (many of whom were college students) and even more unwanted press.

### Moving toward action

In response, Polaroid announced that, in addition to banning sales of the ID-2 system, it would discontinue the sale of "any Polaroid products, including film, directly or indirectly, that may be used in this program." The sale of Polaroid products, such as film, cameras and sunglasses, outside the Passbook program was unaffected. In the same communiqué, Polaroid announced the formation of an internal "Committee on South Africa," led by an executive vice-president and consisting of seven Black and seven white employees. One week after its establishment, the committee met twice, for six and nine hours.

Polaroid cofounder Edwin Land spoke for an hour at the first meeting. Disturbed by Polaroid's association with apartheid, Land stated, "when I and other members of management found out that some of our film was getting into this [apartheid] program, we said 'we are going to stop it.'" (Interestingly, Land emphasized the Passbook program's use of the Polaroid film, not the ID-2 system.) Without mentioning the Polaroid Revolutionary Workers Movement by name, he stressed his desire for "participation," and not demands, from the protesters. Land echoed a familiar anti-establishment chant in his concluding remarks. "The world is watching us right now ... Polaroid is considered a great and generous company. Shouldn't we use that power?"

At one committee meeting, a Black participant, reflecting on his personal experience, asked why—since he did not appreciate being told by white people what he could or could not do—Polaroid would expect South Africans to respond positively to demands from an outsider. The committee concluded it was best to

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make a fact-finding trip to South Africa before Polaroid developed a response to apartheid.

A little more than a month after the call for a boycott of Polaroid, the company announced the trip nationally in a 25 November advertisement that asked, "What is Polaroid doing in South Africa?" The advertisement highlighted Polaroid's minority hiring practices and publicly condemned apartheid. But the ad did not answer its own question. Instead, it listed possible responses to apartheid, and concluded Polaroid required more information before it could develop a meaningful and effective one.

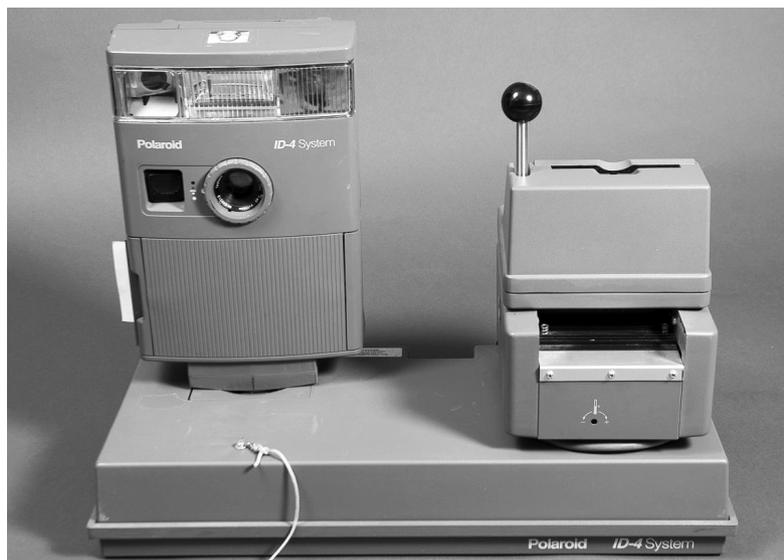
One week later, on 2 December, four Polaroid employees, two Black and two white, left for South Africa. The team interviewed 150 South Africans, both Black and white, over 10 days. Upon its return, the team reported that the majority of Black South Africans it interviewed believed engagement, and not divestiture, was the best course of action to improve working conditions.

Some comments from interviewees spoke more directly to the dehumanizing aspects of the Passbook program—while offering backhanded compliments to Polaroid's technology. "The pass camera was good because it only took a few minutes of humiliation to get the picture done," one interviewee noted. Another suggested that "if Polaroid stopped selling cameras here for political reasons the Government would get a ready dealer to provide a slower camera. Then the process would take a lot longer."

### The Experiment is born

On 12 January 1971—little more than three months after Ken Williams brought to the company's attention the use of its technology in South Africa's Passbook program—Polaroid announced "An Experiment in South Africa" in a second national advertisement.

As part of the Experiment, Polaroid would take "the necessary steps to guarantee improved salaries and benefits for nonwhite employees at Frank and Hirsch, expand worker training for upward mobility, and commit significant financial support for black education in South Africa." The advertisement stated that apartheid was "repugnant" and that "South Africa alone articulates a policy contrary to everything we feel our



Polaroid's ID-4 system for instant ID cards. The use of an earlier version of the system, the ID-2, in the South African Passbook program sparked protests against the firm.

Ken Shymka and Beau Photo Supplies

company stands for. We cannot participate passively in such a political system. Nor can we ignore it. That is why we have undertaken this experimental program."

The essence of Polaroid's response was that its reputation and market share could influence the South African government, not just Frank and Hirsch. Response to the Experiment was mixed. Many applauded, including numerous U.S. newspaper editorial pages and some Black leaders in the United States and in South Africa. The latter included Chief Gatsha Buthelezi, leader of the Zulus. Alan Paton, the white author of *Cry, the Beloved Country*, also spoke approvingly of Polaroid's actions. But many other activists objected to the Experiment's narrow focus on improving working conditions within an inhuman and oppressive system. They decried a veneer of righteousness in the name of profit.

It also bears noting that by the end of 1970, before the Experiment was formally announced, Ken Williams was no longer with Polaroid. Some sources indicate he quit; others claim he was fired. Caroline Hunter continued with Polaroid, even while promoting the boycott of the company's products. In February 1971, she and



Williams testified before a United Nations committee on apartheid. Three days later, Hunter was fired for her activities, which Polaroid stated were detrimental to the company's well-being.

The firm's justification underscores that Polaroid was, first and foremost, a commercial company. After leaving the firm, Hunter, Williams and the Worker's Movement, along with other activists, continued to pressure Polaroid for complete divestment from South Africa, instead of the firm's limited Experiment.

In the Experiment's first year, wages increased at Frank and Hirsch, and grants made by Polaroid to Black educational organizations provided aid to Black students and teachers. The South African Institute of Race Relations wrote "There is reason to be moderately optimistic about the effect of the Polaroid experiment as a relatively important factor in creating a new awareness among businessmen in particular, and the general public, of the depressed condition of the African masses." Consequently, Polaroid continued the Experiment.

## Mixed results

The Experiment lasted six years, and came to a definitive end owing to duplicity on the part of Frank and Hirsch. News reports claimed that the distributor was sending Polaroid film to the Department of Bantu Affairs in unmarked cartons, an allegation confirmed by Polaroid in its own investigation. On 22 November 1977, Polaroid ended the Experiment and divested completely from South Africa. It was the first U.S. company to do so.

Although the Experiment improved conditions for Frank and Hirsch's 155 nonwhite employees, the benefits

Flash unit of the ID-3, a successor to the ID-2. Was the latter's built-in flash an example of bias embedded in technology?

Recycled Goods, Inc.

and conditions were not comparable to those of the company's 210 white workers. Ultimately, the criticisms of the protesters and the Polaroid Revolutionary Workers Movement proved true. Apartheid was so pervasive that an experiment focused narrowly on improving working conditions within a small company could have only a limited ability to change an entire society. Despite the Experiment's objective failure, other companies adopted Polaroid's response and engagement as the focus on apartheid intensified in the late 1970s.

Polaroid's Experiment is an example of how fraught things can be when companies and organizations strive to do good. A Polaroid executive noted afterwards, "the effect was like a spoon in an ocean—a very small effect. But for us, it was the right thing to do." In contrast, Caroline Hunter, who changed careers and became a well-known educator, still speaks vehemently against the Experiment. Her Movement co-founder, Ken Williams, died in 1998.

A final assessment of Polaroid and its Experiment is necessarily mixed. The Polaroid Revolutionary Workers Movement forced the for-profit company to reflect on its corporate mission in light of its stated corporate conscience. Should one assess Polaroid on the fact that the Experiment was essentially a reactive response—and one defined from its inception too narrowly to impact apartheid? Or should the company be judged on the fact it responded at all, or on eventually becoming the first U.S. company to divest from South Africa, in 1977? (As a point of reference, Kodak, one of Polaroid's major competitors, did not divest until 1986.)

## A subtler enemy: Hidden bias

The foregoing has presented the story of the Experiment as case study of a company's mixed reaction to a clear, internationally recognized injustice in the 1970s. But a postscript to the story, unearthed in my research for this article, highlights another angle: The hidden biases that can be embedded in the systems that technologists design.

In 2012—long after Polaroid ended its experiment, apartheid was abandoned and even Polaroid itself had met its demise—the ID-2 system at the center of the original controversy reappeared as an artifact of racism. In an art exhibition that year, titled "To Photograph the

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Details of a Dark Horse in Low Light,” photographers Adam Broomberg and Oliver Chanarin examined the development of Ektachrome film by Kodak, as well as the ID-2 and its associated film.

The ID-2 had a built-in flash, the radiance of which a photographer could increase with the push of a button. The button has become a cause célèbre, as its existence implies that Polaroid knowingly supported racism. When the exhibit appeared in Johannesburg in 2013, Broomberg said in an interview, “Black skin absorbs 42% more light. The button boosts the flash exactly 42%. It makes me believe it was designed for this purpose.”

While that is one interpretation, it seems that if the ID-2 had been designed specifically with the South African Passbook program in mind, the camera and film would also have been designed for dark skin. More plausible is that the boost button is evidence not of overt racism, but of hidden bias.

The characteristics that allowed Polaroid film to produce photographs instantly also increased its contrast. The boost button on the ID-2 was intended to compensate for this when the subject was Black. This serves to highlight a sad truth: for most of its history, the photographic industry did not design film and prints with dark complexions in mind. This has been documented in the evolution of so-called Shirley Cards used to calibrate photographic printing equipment. Until the 1990s, the female models used for Shirley Cards were predominately white.

Although it is comforting to believe we are more aware of this type of bias than we were only a few decades ago, such biases continue to reveal themselves. A high-profile example has been the use of machine-learning techniques and algorithms to enable facial recognition from images. Dishearteningly, many recent studies of such systems have concluded they are racially and gender biased. The parameters and training sets used in these algorithms are revealing designers’ blind spots. Without a committed response to fixing such blind spots, they can be as much an affront to an individual’s life and liberty as a policeman’s knee. **OPN**

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Disturbingly, hidden biases such as those in Polaroid’s ID-2 system have been identified in modern AI applications.

Getty Images

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