

**FLASH
+ CUBE**
[1965-1975]
Marget Long

FLASH + CUBE
(1965-1975)



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For Carolyn

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Cover art, United States Patent 3,327,105, Disposable Multilamp Photoflash Unit. Filed, December 14, 1964.

FLASH + CUBE (1965-1975) was printed by Oddi Printing in Iceland.

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This book is about the Sylvania flashcube—a space-aged, flash photography device, revolutionary in 1965 and nearly obsolete by 1975. Like any visual study of a single object, this project isn't fixed neatly in one discipline or one time. When I look back at this artifact I am given access not only to its material residue but also to its more ghostly reflections of the cultural, political and economic imperatives of its moment.¹

Why this object? The flashcube was a mesmerizingly beautiful and utopian source of light. It was manufactured by the millions, for amateur use at a time when photography was radically expanding as a domestic practice. The cool, contained cube marked an important break from the burn-prone, open-faced flash devices of the 1940s and 1950s.² Its shiny, Warholian surface encapsulated the counter cultural zeitgeist of the late 1960s; after firing, the flashcube's blasted interior looks like the devastated landscape of an atomic age.

Despite its mass appeal the flashcube was, like most technologies, eventually abandoned for bigger and brighter things. Today, aside from a short entry on Wikipedia and its collection as a novelty item online, the flashcube is largely forgotten. Photographic flash is, in fact, often relegated to a footnote and is strikingly under-analyzed.³ Yet flash's blinding effects and military genealogy, and the flashcube's precise contemporaneity with the war in Vietnam make this a rich analytical object to reflect on the continuous links between light, war, history and photography. To put it another way, the flashcube is good to think with.

In most urban spaces we are conditioned to the total presence of cameras. We expect to see hundreds of photographs-in-the-making in the course of a day, from a tourist using a camera phone to a security camera gathering images from the side of a building. We are, by now, mostly numb to these things. But we are not (and perhaps can never be) entirely anesthetized to the bodily effects of photographic flash. Its light is a startling physical reminder of a camera's proximity and its power. The short, intense blast of a light is what awakens us to the fact that a photograph has been taken and, by extension, to photography's profound sensory presence in our lives, for better or for worse. For better, we have nearly seamless access to images in our intimate spheres as well as from across the world. For worse, we have the constant nagging feeling that we might be the subject of an unwanted "tag" or on the receiving end of a surveillant camera. On the extreme end of this experience, there is now a prototype camera that can photograph *around corners*. Using an ultra-short laser flash, that camera records a hidden subject's multiple reflections and then interpolates a 3-D image based on those reflections.⁴ While we will never be physically "awakened" to this stealth camera (silence and secrecy are the preconditions of its very existence), we can, via the kind of close analysis that I perform here, more fully understand the potential applications and implications, both positive and negative, of a future camera that can "infer the structure of things" outside of its direct line of vision.⁵

All outmoded objects have a story to tell. But how does looking at a defunct photographic device differ from unearthing something like a manual typewriter from 1960s or an 8-track tape from the 1970s? Specifically, what is the significance of the flashcube's status as an expired photographic tool? Examining photography's material past seems crucial at a time when photos themselves have become increasingly important in our everyday lives and yet strangely untouchable and de-materialized—flying by as bits of matter on a screen or floating somewhere on a distant “cloud”. There has been new urgency expressed—among artists, art historians and theorists – in considering photography's more concrete physical forms. Photographic prints, though materially present, can sometimes fail us in this regard. They record a precise moment in time but they don't often reveal much about the conditions under which they were made, the information outside of the frame. Photography's material supports—the cameras, the lenses, the computer chips—can however provide deeper insight into the social, political and economic forces behind the pictures we make, circulate and consume.⁶

This book was conceived as an artwork. It is an archive of pictures and texts intended for the printed page. The materials are wide ranging: from a “terrorist letter,” advertisements, press photographs from Southeast Asia, G.I. snapshots, my snapshots, 1970s photo contest pictures, newspaper and magazine clippings, to corporate communications, blog entries, technical drawings and montage. Some of these materials have been altered; all of them have been carefully assembled to encourage close scrutiny of the flashcube and its material circumstances.

Like any other archive, this one is not neutral. The project grew out of the love of an object. Over time it became a negotiation between that attraction and a critical assessment of the conditions that produced it. In the end I hope that my unorthodox strategies—a visual study assembled primarily of visual materials—can point to other experimental ways for artists, scholars and others to approach the investigation of the everyday devices use, both past and present.

Marget Long
New York, January 2012

1. Nicholas Mirzoeff's ground-breaking work in the field of visual studies was crucial in shaping the way I came to think of and think through the flashcube. The ideas, debates and object studies collected in *The Object Reader*, edited by Fiona Candlin and Raiford Guins (New York: Routledge, 2009) were also formative: that book gave me the intellectual framework and the permission to ply the flashcube with the attention that I was already (artistically) intent on giving it.

2. The flashcube was replaced by the “flashbar” around 1976, and later by the more powerful built-in flash units used on most cameras today.

3. There are countless how-to manuals on the use of photographic flash. There are also several excellent historical accounts of flash's early applications. For example, see *Chris Howes's To Photograph Darkness: The History of Underground and Flash Photography* (Carbondale, Ill: Southern Illinois University Press, 1990). There is, however, a near total absence of theoretical writing or scholarship on photographic flash. One exception is Thomas Keenan's “No Flash” in *Assemblage*, No. 20, Violence, Space (April 1993) p. 48-49.

4. This “transient imaging” camera technology is the creation of Ahmed Kirmani, a graduate student at MIT. He frames the project as an “entirely new imaging domain” that relies on continuous time sampling of the light reflected

off of hidden objects. Some of the recorded imagery is not visible to either the camera or the source of illumination. When finally “field ready” the applications for this new technology include “looking around the corner: rescue and planning, vehicle navigation around blind corners, medical imaging” as well as, presumably, many other unspecified military applications. For a full description of Kirmani's project, see <http://dspace.mit.edu/bitstream/handle/1721.1/58402/656284100.pdf>

5. Ahmed Kirmani, *Femtosecond Transient Imaging*, Thesis Submitted to the Program in Media Arts and Sciences, Massachusetts Institute of Technology (June, 2010).

6. Phil Chang, Liz Deschenes, Penelope Umbrico and many other contemporary artists often emphasize the photographic medium itself, with keen attention to the tools of production, modes of dissemination and forms of display. In his book, *The Edge of Vision: The Rise of Abstraction in Photography* (New York: Aperture, 2009), Lyle Rexler gives a provocative account of artists that, confronted with the rise of digital technologies, have started to “look intently at every aspect of the process of photographic representation.” See also “Hard Copy/Soft Image,” Charlie White's essay on the potential of the photo book in the age of photographic immateriality, published in Mark Wyse's *Seizure* (Bologna: Damiani, 2011).

Knowledge comes only in flashes.
-Walter Benjamin

3 flops and 1 wild success from GT&E research.

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Sometimes this philosophy makes millions of dollars for us (see Eureka!, below).

Sometimes it doesn't make us a penny. Take, for instance

Flop#1: The Wam-O-Scope—a new kind of radar set that was supposed to be 10 times more sensitive than ordinary radar. (This, our scientists told us, was because they put lots of little electronic parts right inside the radar tube, where nobody ever put them before.) Theoretically, it worked fine. Practically, it didn't work at all. Which brings us to

Flop#2: The Stacked Tube. After years of work, we perfected the world's best radio tube—long lived, practically indestructible. Unfortunately, we built it the

same year the transistor was invented, making our tube instantly obsolete. Then there was

Flop#3: The Omegatron—a clever device designed to tell vacuum tube manufacturers precisely how much excess gas they had in their tubes (which, you remember from Physics 1, are supposed to be completely empty). This, however, was more than they wanted to know. They wanted to get rid of the gas, not measure it. So finally, we come to

Eureka! The Sylvania Flashcube—a little idea that revolutionized the whole camera business. For the first time, people could take flash pictures as fast as they could click the shutter—no more hot bulbs to change, no more missed pictures while changing bulbs.

Like all great ideas, it looks simple. But it took more than 100,000 designs and years of fiddling and testing before we made the first one.

What are we up to now, you ask? Dozens of things, from laser research to pollution control.

We even have an idea that might revolutionize the entire color TV industry.

If it works.

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Text of Terrorist Letter

Following is the text of a letter received by United Press International from a group—Revolutionary Force 9—which said it was responsible for the bombing of three buildings in Manhattan yesterday. The letter was postmarked 1 A.M., March 12—an hour before the explosions. The misspellings, abbreviations and use of symbols are those of the writer of the letter.

IBM, Mobile and GTE are enemies of all life. In 1969 IBM made \$250 million, Mobile \$150 million and GTE \$140 million for US "defense" contracts—profits made from the suffering and deaths of human beings. All three profit not only from death in Vietnam but also from Amerikan imperialism in all of the Third World. They profit from racist oppression of black, Puerto-Rican and other minority colonies outside Amerika, from the suffering and death of men in the Amerika army, from sexism, from the exploitation and degradation of employees forced into lives of anti-human work, from the pollution and destruction of our environment.

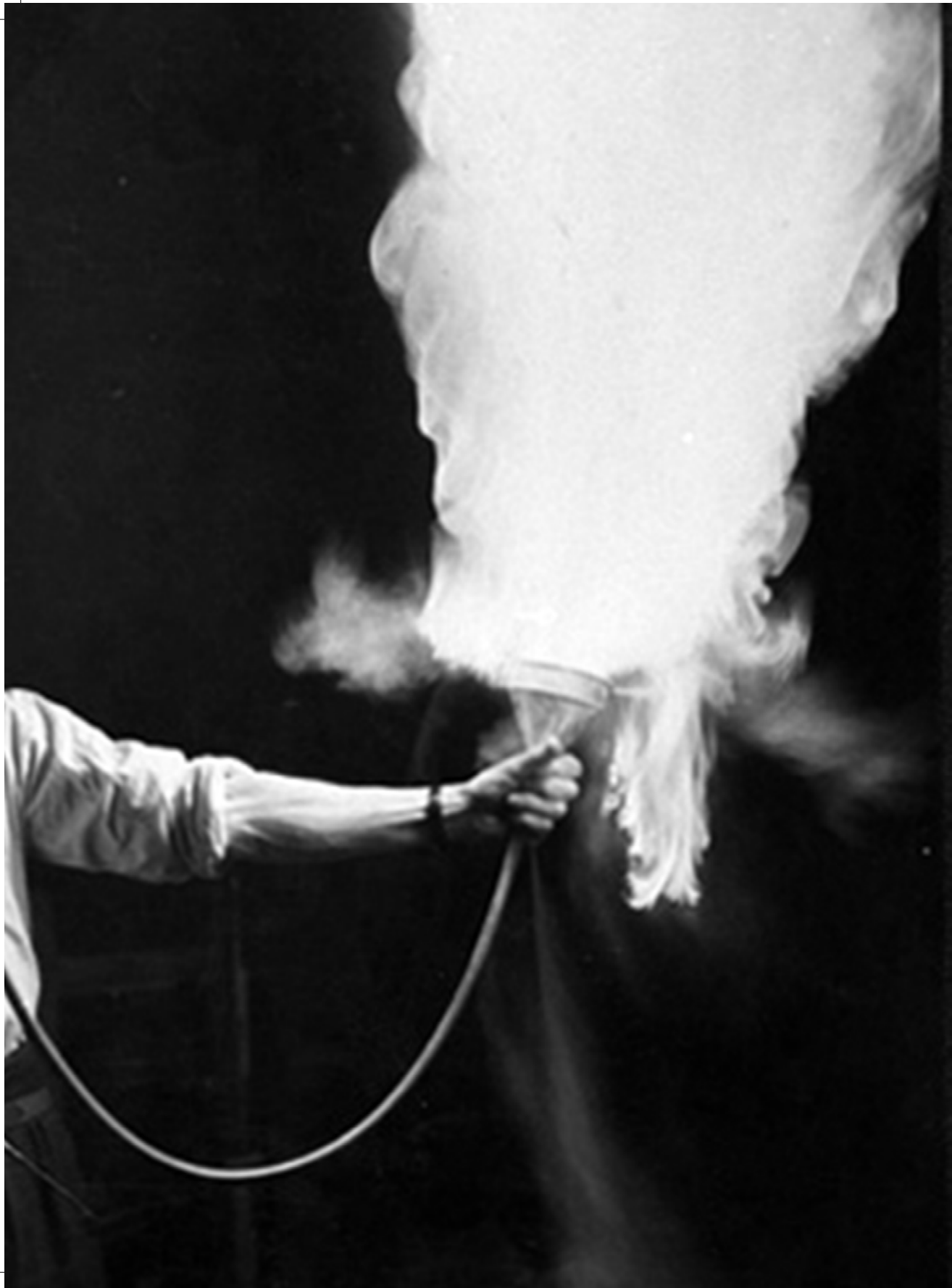
To numb Amerika to the horrors they inflict on humanity, these corporations seek to enslave us to a way of "life" which values con-

spicious consumption more than the relief of poverty, disease and starvation, which values giant cars as status symbols more than the purity of our air (so Mobile can make \$\$\$ thru gas sales).

This way of "life" sucks up 60% of the world's resources—for 16% of the planet's population—and then wastes them in compulsive consumerism and planned obsolescence (so IBM can make \$\$\$ off new model computers), distributes millions of TV sets (Sylvania's included), all the better to put lies into our heads and convince us to buy, buy, buy, and then offers only work helping to produce the goods that bring slow death at home or genocide abroad (or in the USA.)

This way of "life" is a way of death. To work for the industries of death is to murder. To know the torments Amerika inflicts on the Third World, but not to sympathize and identify, is to deny our own humanity. It is to deny our right to love—and not to love is to die. We refuse. In death-directed Amerika there is only one way to a life of love and freedom: to attack and destroy the forces of death and exploitation and to build a just society—revolution.

REVOLUTIONARY FORCE 9



In the early morning hours of March 12, 1970, blasts ripped through the headquarters buildings of GT&E and two other companies in New York City. The terrorist group responsible was protesting the companies' participation in defense work. Ironically, the explosion within an upper floor of GT& E's Third Avenue headquarters destroyed the photo lamp sales department.

Thomas E. McCarthy, *The History of GTE: The Evolution of One of America's Great Corporations*, 1990

Magnesium flash powder test, photographer unknown, circa 1920.



[NOTES 2 & 3]

Marget Long, *The Photo Lamp Division is Bombed*, (GTE/Sylvania Headquarters, 730 Third Avenue), Inkjet Print on Archival Paper, 18 x 12 inches, 2009.



AT GENERAL TELEPHONE BUILDING: A plumber surveying damage on 21st floor before starting to make repairs

The New York Times, March 13, 1970.
Photo by Edward Hausner/ The New York Times.



“Beach in Da Nang,” Soldier’s photograph, circa 1968.

A real bomber’s chilling reasons

On assignment for *LIFE*, Correspondent William Worthy of the Baltimore Afro-American used intermediaries on the political left to reach a man who admitted being involved in bombings. The man agreed to be interviewed but refused to reveal his name or any details about his background and his associates.

Q What do you hope to achieve by bombing?

A We are revolutionaries, not reformists. We’re not trying to frighten the Establishment, we are trying to destroy it, so that a just society can be built based on human values, not on financial or commercial values. It’s necessary to have a real struggle of some kind before people will listen and reconsider their concept of what America is. Ours is an attempt to attack capitalism, racism, exploitation—directly and militarily. These are not attacks on individuals who work in these offices or happen to be there. It is the use that the buildings are put to that we are attacking. For example, a communications center that relays messages to Vietnam, or helps the war industry in any way, if that building can be knocked out of commission for a few hours or days, that’s equivalent to the act of a liberation fighter who does the same thing in his own country.

Q Are you organized nationally?

A Obviously any one group of revolutionaries is responsible only for a number of bombings in one locality. For reasons of security and in order to function together as a group of people who have to live and fight and love together, it is necessary that we function as autonomous groups. There are different points of view: some groups are united by political connections, but most of them as far as I can tell are independent groups doing what they know is necessary.

Q Are you under any foreign direction?

A Absolutely not. We receive from our foreign comrades only the gold of love and respect. They don’t have to train us in military techniques. The U.S. is training vast numbers of its young men in military techniques.

Q Then how do these autonomous groups you refer to, like your own, get money for their activities? How do you live?

A We obtain money by any means necessary. It may be money that one of us has had, or has worked for. It may be money we obtained through a form of liberation. Society calls it stealing. We call it liberating.

Q Are women in the forefront of the sabotage and bombing stage of the movement?

A Yes. That sweet little secretary at the next desk may be a revolutionary who is planting bombs at night. Women have been more oppressed than men and often they have a greater understanding and greater motivation when they are liberated. They are in the leadership of all the revolutionary groups.

Q Where do you think the country is now, on a political timetable?

A Obviously the U.S. is becoming more openly fascist. As time goes on, more and more Amer-

icans will come to understand, just as my friends and I have, that the simpler, more peaceful means of change will not work.

Q Is that a preview of actions coming up?

A I can only say that this is a technological society which is extremely vulnerable because the people who are attacking it from within are not foreigners—not anarchist terrorists in the classic sense—they are the children of this society who have had their eyes opened to the nature of this society and they refuse to be part of it. But the society must have them as its clerks, its technicians. Therefore young people throughout the country will increasingly be inspired to disrupt communications, to put sand in the gears.

Q Once committed to revolution, how does a person learn the techniques of bombing?

A Most people learn by reading. There are several manuals published by the U.S. Army on sabotage, on construction of bombs, that are available to the public. The ludicrousness of the Establishment now saying it’s going to put laws on the distribution of explosives! Explosives and literature on explosives have been disseminated in this country for too many years for any laws to prevent anybody from obtaining the information if they want it.

Q What about obtaining the explosive materials?

A So far they have been a mixture of commercially purchased materials and materials manufactured by the people themselves. The two main problems are in manufacturing explosive devices that are sufficiently powerful and are sufficiently reliable.

Q Isn’t it very serious if amateurs start dabbling in these fatal materials?

A Well, there will be mistakes. We are doing this not because we are concerned with our individual safety. Some people are more careful than others. Some aren’t patient enough. It’s a mistake when the device does not go off. It’s a mistake when it does not go off in the prescribed manner.

Q Is this something that people under the influence of pot or LSD or speed can engage in successfully?

A I can’t speak for all the groups. In our group no drugs are allowed for anyone involved in any kind of political-military activity. If anybody is dependent, psychologically or physically, on any drugs we will not work with him. We work as a disciplined group or not at all.

Q What other precautions do you take?

A First of all, explosives should be handled by people with technical knowledge. Explosives should not be stored where the manufacture of the bomb goes on. But it is necessary for us to deliver these things secretly. We don’t have B-52s to drop them from, so there are risks we must undertake. We learn as much as possible about the dangers of the different kinds of explosives—dynamite, different nitrate combinations, the properties of aging dynamite.

Also it is important that the timing device and igniter be as foolproof as possible so you can arm the bomb as close as possible to the

time you’re going to plant it. It’s essential because our purpose at this stage is not to have any injuries either to our own people or to people at the sites.

Q You said “at this stage.” Can you amplify that?

A At some future point it might be politically correct to attack also the heads of major war industries, in effect the war criminals of the U.S. But that stage cannot be reached until it is clear to the public that these are war criminals.

Q Is it true that some of your materials come from military sources?

A It’s true that some GIs coming back from Vietnam, who have seen what it’s really like there, have become part of the revolution. They bring back supplies—guns, explosives, other equipment liberated from the military—but primarily they bring back the knowledge of how to use these things and the knowledge of what it is to put your life on the line.

Q Let’s switch to a typical bombing episode. How do you go about it?

A I don’t want to be too specific. But the first decision is political—determining appropriate and possible targets. Once a set of targets is decided on, they must be reconnoitered and information gathered on how to approach the targets, how to place the bomb, how the security of the individuals and the explosives is to be protected. Then a time is chosen and a specific target. Next there is a preliminary run-through—in our case a number of practice sessions. Sometimes we don’t do this as well as we should. The discipline during the actual operation is not to alter any of the agreed-upon plans or to discuss the action until everyone’s safe within the group again. Our desire is not just for one successful action but to continue as long as possible. Success at this point is relatively simple. In spite of the elaborate security measures the Establishment has taken, their buildings will continue to be vulnerable until they change the nature of their activities.

Q But what if a night watchman or cleaning woman in one of these buildings gets killed?

A We want to make it as clear as possible that that would be an accident—a grievous accident.

Q Sooner or later, some people are going to be arrested for these bombings. What would your defense in court be if you found yourself the defendant in such a case?

A Twofold. One, to say that I’m innocent, and two, that these courts have no right to judge my guilt or innocence in any event. The courts represent the very power structure that is causing much greater violence. The courts are the criminals and I would never beg the criminals for mercy.

Q About the future, are you pessimistic?

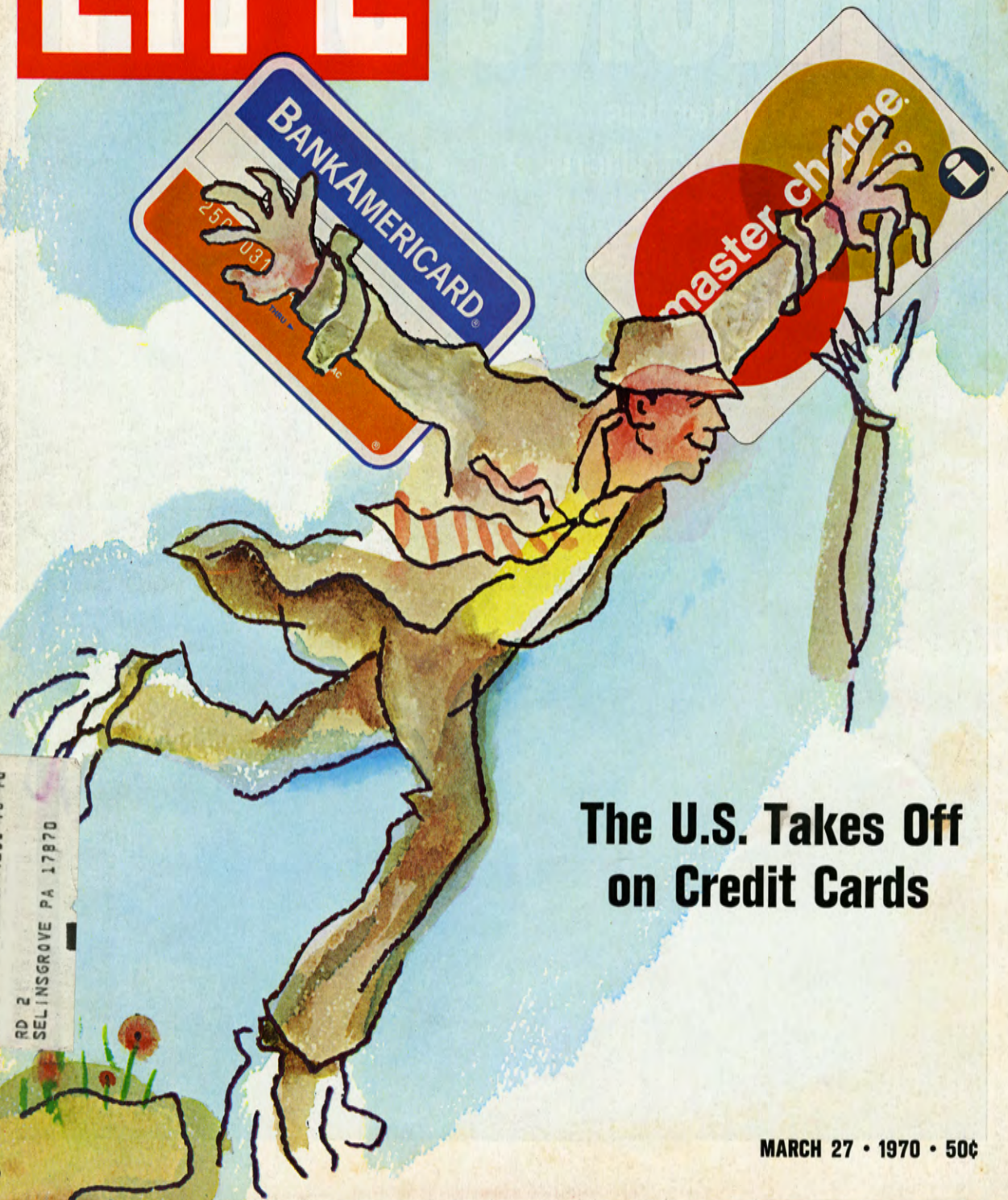
A I’m optimistic as hell. This may take five to 50 years. It’s not important whether I personally see the successful conclusion of the first real American revolution. It’s only necessary to be part of it. I haven’t been depressed since I realized I was part of the revolutionary process.

“Bombs Blast a Message of Hate,” *Life*, March 27, 1970.

LIFE

A political fringe turns to terrorism

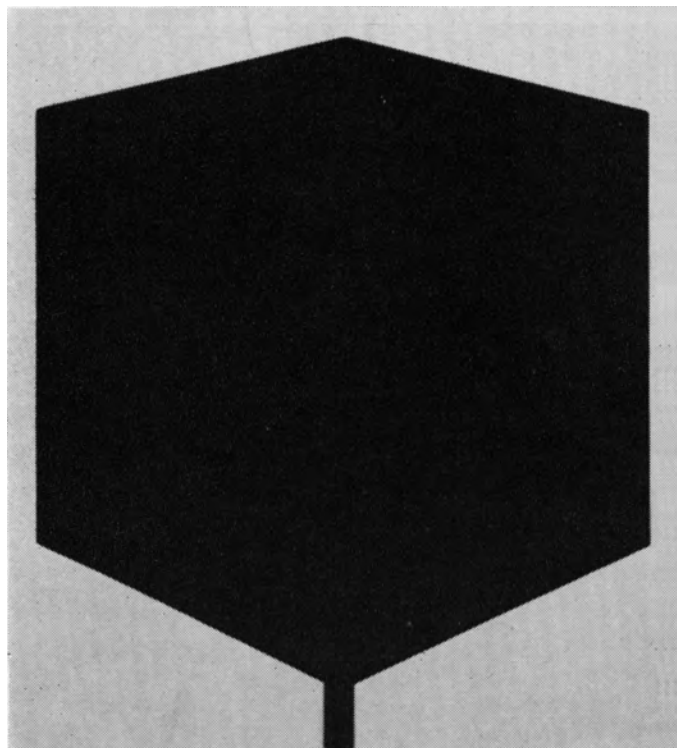
THE BOMB RADICALS



**The U.S. Takes Off
on Credit Cards**

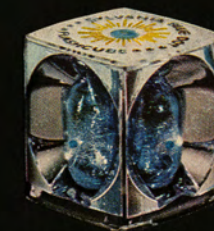
MARCH 27 • 1970 • 50¢

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[NOTE 4]

Lighting Diagram, Ansel Adams, *Artificial Light Photography*,
Basic Photo Series (New York: Morgan & Morgan, 1956).



One Blue Dot Flashcube lets you take 4 snapshots.
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Take the Flashcube. With it, you get the great pictures that used to get away. And capture photo sequences never before possible.


It's a beautiful invention and a major advance in a field where Sylvania is already number *one* with the famous Blue Dot Flashbulb.

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We're 116,000 strong and dedicated to Total Communications.

GTE

GENERAL TELEPHONE & ELECTRONICS 



The Pillow Plan.

An absurd way to decorate your home.

We've got cans of Fresca for you to lie on.

And Tootsie Rolls.

And lots of Sylvania flashcubes.

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They're Pop Art pillows.

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Even Louis the XIV and Chippendale and early American.

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One pillow is \$3. All three are \$8.50.

(About half the regular price.)

And they're good solid pillows, with zippered dye-fast cotton covers. (Not the inflatable type pillows.)

Cut the coupon out of this ad.

And send it in along with the front panel of a package of Sylvania Blue Dots.

You can make your home swing now for practically no money at all.

That's not an absurd idea at all.

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\$3: one pillow. \$8.50: three pillows.
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Allow 4 weeks for delivery.
(Valid in USA, except where taxed, restricted or legally prohibited. Good until Sept. 30, 1969.)



[NOTE 6]

4 Flash Bulbs in One Introduced
By Sylvania and Eastman Kodak

Device Known as 'Flashcube'
to Be Used With New Line
of Instamatic Cameras

By GENE SMITH

Sylvania Electric Products, Inc., and the Eastman Kodak Company unveiled jointly yesterday a new concept in flash photography.

The two companies introduced what they called "Flashcube"—four flash bulbs with a single socket developed by Sylvania—and a new line of eight cameras by Kodak that use the four-sided bulbs as fast as the finger can snap the trigger mechanism. This action advances the film and turns the Flashcube for the next exposure.

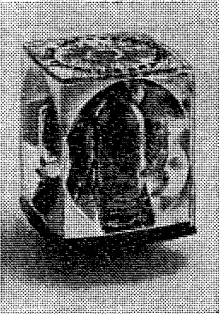
The two developments were one of the best-kept industrial secrets of recent years. Nevertheless, news of their announcement at a press conference in the Waldorf-Astoria Hotel seemed to create a stir in financial circles. The General Telephone and Electronics Corporation, parent of Sylvania, was the 12th most active issue of the day, adding $\frac{3}{4}$ to close at 41 on a turnover of 31,900 shares. Kodak closed at 81 $\frac{3}{4}$, up 1 $\frac{1}{4}$, on a change of 16,100 shares. It traded earlier at 82 $\frac{1}{2}$.

Gene K. Beare, president of Sylvania, said that the Flashcubes had been more than two years in the developing stage.

Shipments to Warehouses

"We've been shipping huge cartons of these to warehouses all over the country prior to this unveiling," he said in an interview after the showing. "To insure complete secrecy they went out in plain boxes with only the marking 'P-14' on them. In that way we are assured of plentiful supplies as the demand grows."

On its part, Kodak has redesigned its Instamatic line of cameras to include the socket for the Flashcubes and to synchronize film and flashbulb movements. There are six new Instamatrics in the line and two new 35 millimeter models using regular film magazines. The suggested list prices range from "less than \$18" for the most



Flashcube designed by Sylvania Electric Products.

simple Instamatic to "less than \$125" for the top 35 millimeter model.

A sleeve of three Flashcubes—12 flashbulbs—carries a suggested retail price of \$1.95. Single cubes sell for 65 cents.

Kodak officials told the gathering that during the last spring, volume of Instamatic cameras had topped 10 million since the original line was introduced two years ago. Kodak officials said they expected the new line to do just as well.

The new camera line will go on sale immediately and will be introduced in Canada later this year. It is planned to have them available overseas in early 1966. Prices on the line are lower than previous models, reflecting the elimination of Federal excise taxes.

Paul Cameron, vice president of Sylvania's lighting products division, estimated sales of the Flashcubes would reach 50 million cubes, or 200 million flashbulbs, within the first year.

"Sales will be limited only by availability of cameras," he added.

Kodak officials said that all Instamatrics will be of the new type, including the socket for the Flashcube, from this point on. They indicated they had no plans to market adapters to convert standard cameras to the Flashcube, but added that "some outside manufacturers will probably do just that and find an entirely new industry for themselves."



(previous page, left) Marget Long, *Casino*, Reunification Palace, Ho Chi Minh City, Vietnam, 2010.

(previous page, right) *Life*, 1969.

(this page, left) *The New York Times*, July 9, 1965.

(this page, right) Marget Long, *Sylvania Flashcube (Used)*, C-print, 40 x 30 inches, 2009.

Revolutionary Force 9 Recalls Beatles' Song

Revolutionary Force 9, the name taken by those who claimed responsibility for three bombings here yesterday, may have been derived from a Beatles' song called "Revolution Number 9."

The song, part of an album entitled "The Beatles," which was released by Apple Corps Ltd. for Christmas sales in 1968, is a tuneless concoction running 8 minutes 15 seconds.

It begins with a man droning "number nine" over and over, followed by a cacophony of symphonic music, convulsive laughter, a baby crying, bells, machine-gun fire, speeches, conversations and yells. Interpretations vary, but some believe the song captures a feeling of violence and portrays "the destruction of the world."



The idea had got abroad that there is great risk and danger involved on account of the explosive nature of the blinding, smoke belching, evil smelling, flashlight powder...The flashpan was a piece of equipment which a wise photographer kept in his cupboard, and only took out when there was no other way to get the job done...The unsavoury reputation of this disgusting powder still clings to the name of flash.

Photo-Flash in Practice, 1947

(previous page) Marget Long, *Papa Flash's Gun*, (Edgerton's High-Speed Flash Photograph, Phillip Jones Griffith's Elephant Grass, Sylvania Blue Dot), Inkjet Print on Archival Paper, 13 x 19 inches, 2009.



FLASH ONE-TWO-THREE-FOUR BEFORE CHANGING

What new development will make indoor photography four times as much fun for the nation's millions of camera fans? The new Blue Dot Flashcube, developed by GT&E's Sylvania subsidiary for use with the new Kodak Instamatic cameras. Pop one on and you're ready to take four flash pictures without changing bulbs! The Sylvania Blue Dot Flashcube revolves after each shot, bringing a fresh Blue Dot flashbulb into position, with its own built-in reflector. With this latest of many important innovations from GT&E, millions of home photographers will get the great shots that used to get away while they were changing bulbs. The Sylvania Blue Dot Flashcube is another example of how GT&E keeps growing through constant research and swift response to the changing needs of the public.

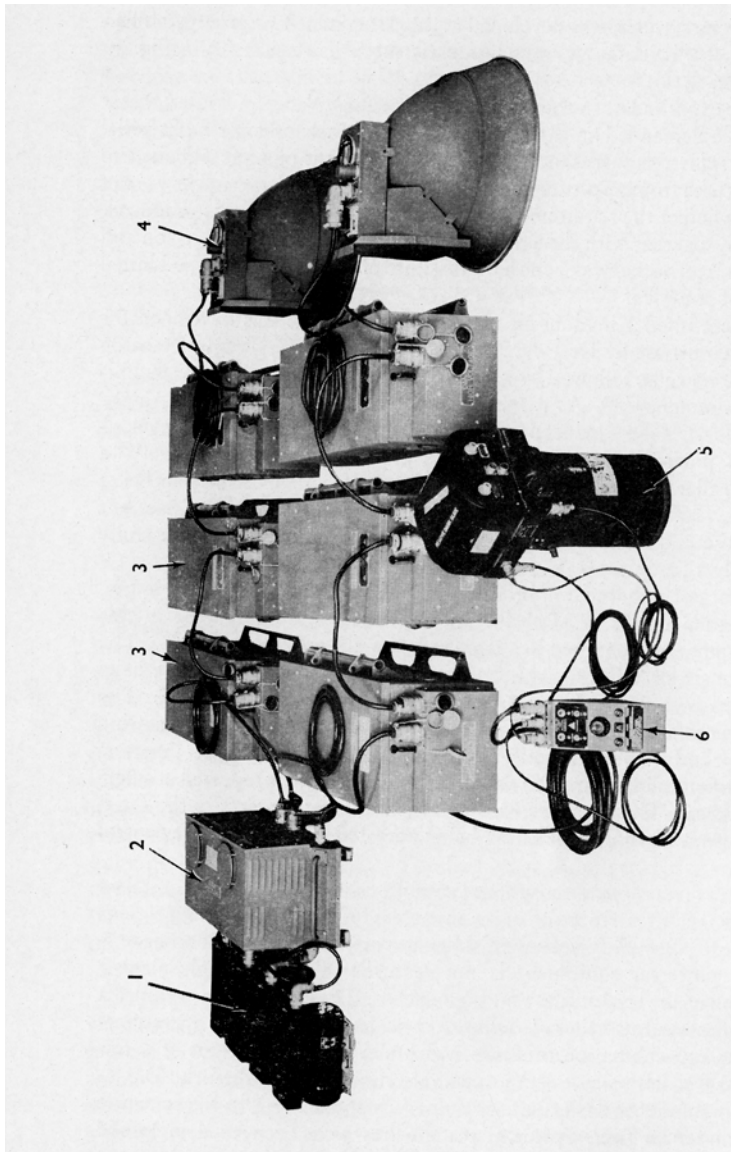
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730 THIRD AVE., N.Y. 10017 • GT&E SUBSIDIARIES: General Telephone Operating Cos. in 33 states • GT&E Laboratories • GT&E International • General Telephone Directory Co. • Automatic Electric • Lenkurt Electric • Sylvania Electric

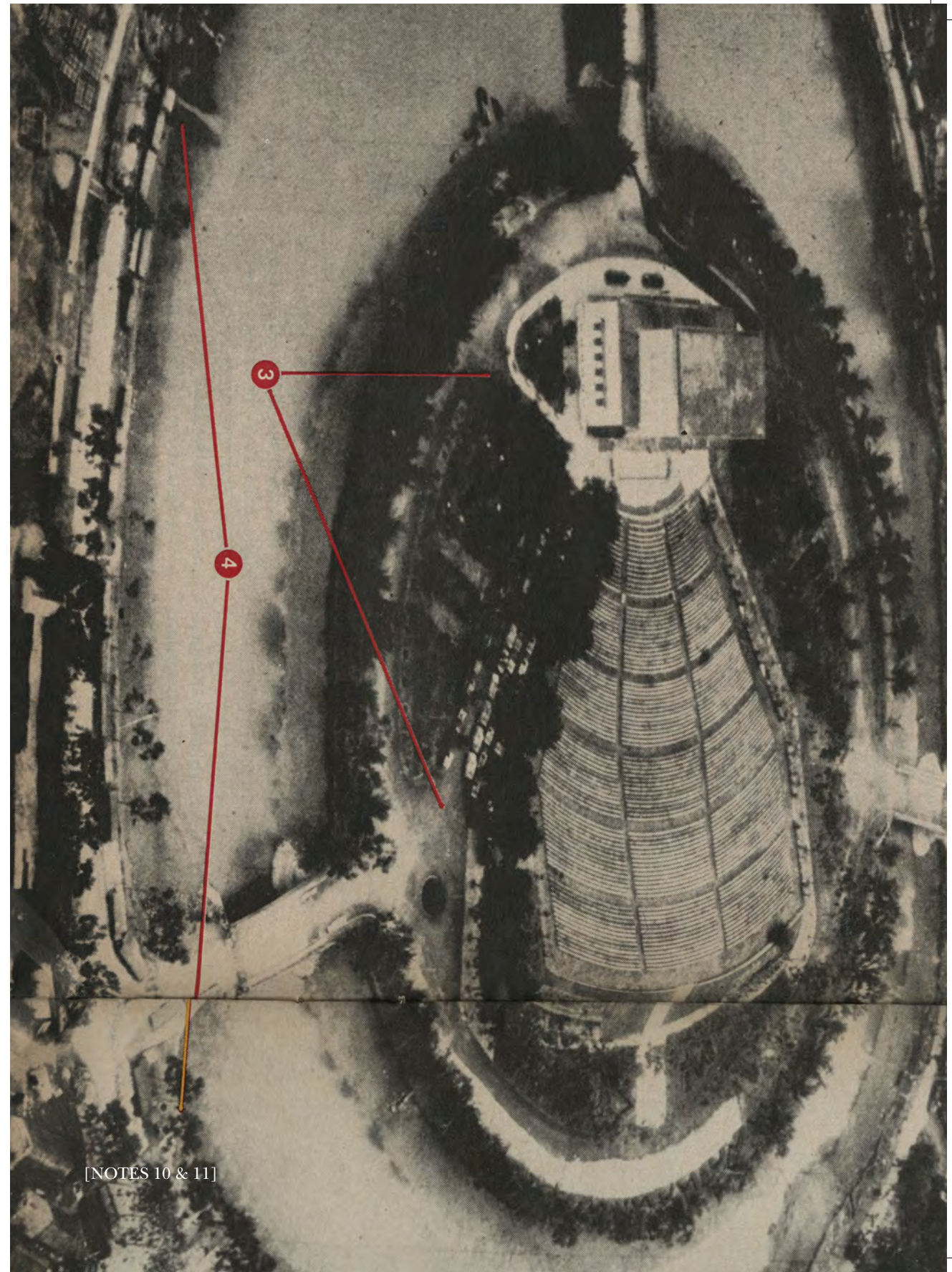
[NOTE 9]

Forbes, August, 1965.



(left) Large Flash Installation, The American D5 used for aerial reconnaissance.
Ralph L. Aspden, *Electronic Flash Photography* (New York: The MacMillan Company, 1960).

(right) *Life*, April 12, 1968.



[NOTES 10 & 11]



Illustration shows scale model of the Atlas-type missiles installed at Vandenberg AFB

Teamed for defense

An alert defense depends on many kinds of communications. ☎ And at the Air Force's first operational ICBM base at Vandenberg AFB, Gen Tel helps fulfill these needs. ☎ The link to the "outside" is a fully automatic telephone exchange that was provided by our subsidiary, Automatic Electric, and is operated by General Telephone of California. Here, as elsewhere, GT&E is playing its part in national defense. ☎



GENERAL TELEPHONE & ELECTRONICS

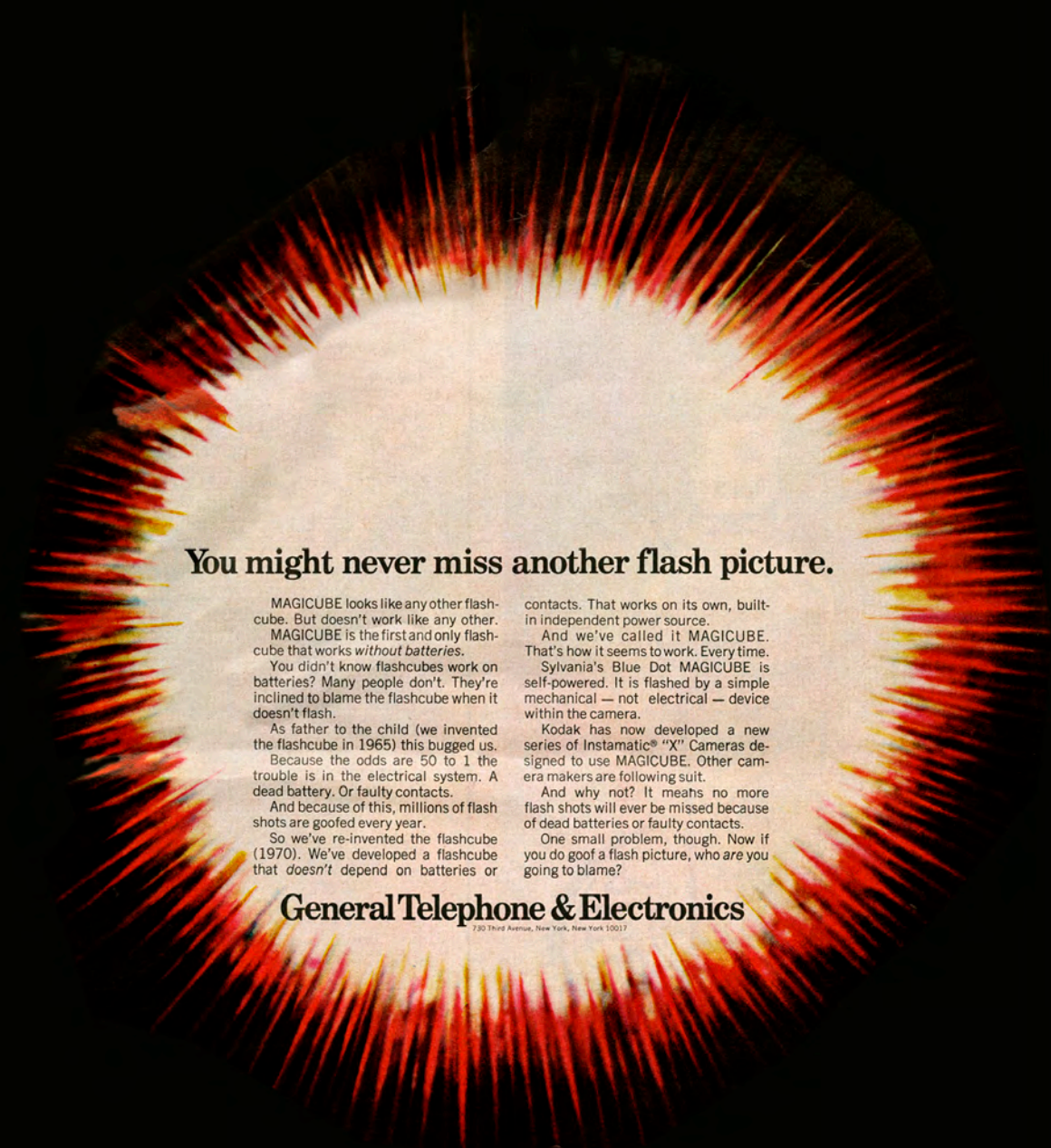
730 Third Avenue, New York 17



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From Sylvania research comes MAGICUBE...



You might never miss another flash picture.

MAGICUBE looks like any other flashcube. But doesn't work like any other. MAGICUBE is the first and only flashcube that works *without batteries*.

You didn't know flashcubes work on batteries? Many people don't. They're inclined to blame the flashcube when it doesn't flash.

As father to the child (we invented the flashcube in 1965) this bugged us.

Because the odds are 50 to 1 the trouble is in the electrical system. A dead battery. Or faulty contacts.

And because of this, millions of flash shots are goofed every year.

So we've re-invented the flashcube (1970). We've developed a flashcube that *doesn't* depend on batteries or

contacts. That works on its own, built-in independent power source.

And we've called it MAGICUBE. That's how it seems to work. Every time.

Sylvania's Blue Dot MAGICUBE is self-powered. It is flashed by a simple mechanical — not electrical — device within the camera.

Kodak has now developed a new series of Instamatic® "X" Cameras designed to use MAGICUBE. Other camera makers are following suit.

And why not? It means no more flash shots will ever be missed because of dead batteries or faulty contacts.

One small problem, though. Now if you do goof a flash picture, who are you going to blame?

General Telephone & Electronics

730 Third Avenue, New York, New York 10017

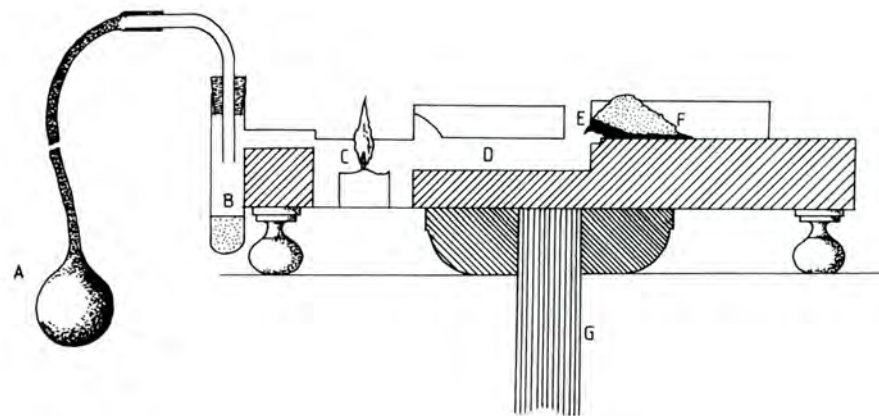


(previous page) *Life*, September 4, 1970.
(this page) U.S. Air Force Photograph, Vietnam, precise location unknown, circa 1969.



1st Prize

The judges awarded the First Prize to Dr. William M. Johannes, a 60-year-old dentist from Columbus, Ohio, for this incandescent double exposure. First he shot the sun a half hour before it set on a cloudy day. Then, on the same frame of film, he photographed a close-up of a dandelion puff.



Early flash apparatus used a blast of air from a bulb (A) to blow lycopodium spores (B) into a candle flame (C). These glowed and were directed down a tube (D) to light a twist of guncotton (E) which fired the flashpowder (F). This was used successfully, on the end of a pole (G), in Hermannshöhle, Germany.



[NOTE 14]

Marget Long, *Thirty Frames, Hush...Hush, Sweet Charlotte* (1964),
Inkjet Print on Archival Paper, 16 x 20 inches, 2011.

Photography

Amateur Spending Is on Rise

By JACOB DESCHIN

AMATEUR photographers spent 21.8 per cent more money on their hobby in 1965 than in the preceding year, according to the 1966 Annual Statistical Report of the Photographic Industry in the United States, published last week. The report, which is compiled and edited annually by Augustus Wolfman, a leading industry consultant, covers the 1965 period. The publisher is Photo Dealer magazine, a trade journal.

The impetus for the increase in spending came largely from the acceleration in the sale of instant-loading — mainly the 126 drop-in cartridge class—cameras, and the Polaroid Swinger, Mr. Wolfman writes. The total spent by amateurs was about \$1.4-billion.

Among the factors contributing to improvement in sales to this group during the year were these:

Amateurs made 10 per cent more pictures, or a total of 2,930,000,000 prints (57 per cent in color) as against 2,650,000,000 (52 per cent in color) the year before.

Amateur spending for photo-finishing reached a new high of \$500-million, of which \$370-million (compared with \$300-million the year before) went for color processing and printing, and \$130-million (a drop of \$5-million from the year before) for black-and-white. These figures refer to both still- and movie-film processing; practically all of the latter was color.

Camera Sales Up

Although sales of 35mm cameras dropped to 420,000 units, a decrease of 100,000, over-all camera sales rose by 30 per cent, the increase attributed by Mr. Wolfman to the phenomenal sale of instant-loading cameras.

After zooming to 72,500 unit sales in 1964 from only 16,500 the year before, the single-frame or half-frame camera also fell victim to the fast-growing preference for the instant-loading camera. The single-frame figure for 1965 was down to 22,500.

Amateur demand for flash bulbs jumped more than \$10-million, to \$60.6-million, a record for the 10-year period listed in the report. The advent of the flashcube is reflected in this figure.

New highs are reported both in exports and imports of photographic merchandise, the totals reaching nearly \$237-million and \$119-million, respectively.

Mr. Wolfman reports that Japan topped all importers, with 34.1 per cent of the total imports for 1965. West



AT A GROUP READING SESSION IN PEKING—From Marc Riboud's picture-and-text book, "The Three Banners of China" (Macmillan) and his exhibition of the same name at Asia House, 112 East 64th Street.

Germany was second, with 23.4 per cent. Percentages for equipment imports were 54.6 per cent for Japan, 26.9 per cent for West Germany. Belgium was the largest foreign supplier of sensitized goods, with 51.7 per cent of the total; West Germany sent 18.4 per cent, and Japan 4.3 per cent.

AT THE GALLERIES

"The Three Banners of China" is the title of Marc Riboud's show at Asia House, 112 East 64th Street, and of his book (New York: Macmillan, 216 pp. \$12.50), for which he has also supplied about 8,500 words of commentary. The show includes photographs drawn from Mr. Riboud's general portfolio, but the impression is that the show is meant to complement the book.

The title refers to the division of the book into the three aspects of the country that Mr. Riboud recorded for Magnum, first in 1957 during a sojourn of four months, then for another four months in 1965.

The "three banners" are the People's Commune, or way of life in the new order; the Great Leap Forward, into the 20th century, and the General Party Line.

Where the pictures are strong, they are among the most powerful and informative that have come out of China in recent years. The weaker ones sometimes approach the level of the cliché and the routine, a fault that is inevitable in such large collections. The book contains 100 black-and-white and 50 color reproductions, and the display at Asia House is rather large.

Within the limitations of the restrictions on his freedom of movement, Mr. Riboud has produced coverage that communicates a sense of how things are going in Chi-

na. If one has a feeling of emphasis on propaganda, especially in the last part of the book, that is, of course, what he saw. As a highly competent photojournalist, he was obliged to report it in his pictures.

At the Panoramas

After some months since its last photography exhibition, the Panoramas Gallery at 62 West 56th Street announces a new show to be displayed Jan. 3-14. This one is in black-and-white, a change of pace from the gallery's run of color shows.

The photographer is Stella Snead, a painter and sculptor now turned photographer and author. Her photographs at the gallery were taken on beaches in India and elsewhere in her travels. They are mainly abstracts in which texture, pattern and form are used to produce interesting compositions and arrangements that resemble unidentifiable flowers.

View from Space

About 200 color photographs that tell much of what American astronauts have been seeing in their journeys through space are currently on view at the Gallery of Modern Art in Columbus Circle. Enlarged to 16 by 16 inches, the pictures were taken by astronauts with stripped-down Hasselblads, two of which are displayed at the show.

Exhibited in cooperation with the National Aeronautics and Space Administration, the show also includes 50 black-and-white pictures, most of them informative records of storms and, weather systems, and close-ups of the moon's surface. Also on view are pressure suits and scale models of spacecraft.

EXHIBITIONS

Winning prints in the "Religion in Life" photographic

contest sponsored by the Methodist Hospital of Brooklyn are on view through Dec. 31 at the hospital, 516 Sixth Street.

An exhibition of candid photographs of people talking, reading or eating, by Henry Margulies, will be the January show at the Parents' Magazine Gallery, 52 Vanderbilt Avenue.

"Toward a Social Landscape," an exhibition of photographs by Bruce Davidson, Lee Friedlander, Danny Lyon, Duane Michals and Garry Winogrand, is on display through Feb. 20 at the George Eastman House in Rochester.

EISENSTAEDT SHOW

A compressed version of Alfred Eisenstaedt's recent exhibition at the Time-Life Reception Center will open Tuesday in the Prudential Building Auditorium in Chicago. Representative of his nearly four decades as a photographer, the last three with Life magazine, the show will continue through Jan. 8.

27-FOOT PICTURE

A recent addition to the curiosities of photographic literature is a one-page fold-out picture book that opens to reveal a single photograph 1½ inches high and nearly 27 feet long. Since there are two strips, one at the top, the other at the bottom of the page, the total length is nearly 54 feet.

The book is "The Sunset Strip," which is 5½x7 inches when closed and costs \$7.50, boxed in a chrome sheath. It is the work of Edward Ruscha, who took the trouble to photograph every building on Hollywood's Sunset Boulevard, then butted the prints end to end to make one continuous picture.

Mr. Ruscha, who is a painter, has done this sort of thing before, although not on this scale. The other issues have

been a strip of 26 gasoline stations in the West; "Various Small Fires," a strip of 20 photographs, and "Some Los Angeles Apartments," a strip of 40 photographs of exteriors. The distributor is Wittenborn and Company, 1018 Madison Avenue (at 77th Street).

FOCUS ON PETS

Photographers will have opportunities to take pictures of 1,000 pets and animals at the International Pet and Animal Show, which will be held at the New York Coliseum from Dec. 24 through Jan. 2. The purchase of one adult ticket will entitle the visitor to another ticket free if he brings a camera to the box office.

AT THE ALLIANCE

The Photography Institute of the Educational Alliance, 197 East Broadway, is sponsoring a showing of photographs by Michael Di Biasi at 8 P.M. on Tuesday.

BENEFIT

The Volunteer Service Photographers benefit, "The Christmas Show" and "Follow Me, Boys," will be held Thursday afternoon at Radio City Music Hall. For tickets write V.S.P. at 111 West 57th Street or phone CI 6-3965.

DAYLIGHT DEVELOPER

An improved version of the Agfa Rondinax 35U Tank for developing 35mm. film outside the darkroom has been introduced by Agfa-Gevaert. The \$29.95 plastic tank, which develops cartridges of 12, 24 or 36 exposures in room light, requires seven ounces of solution and includes a built-in thermometer which can be read outside the tank.

IMPROVED AGFA FILM

Improved edge sharpness, resolving power and finer grain have been incorporated in the new Agfa Isopan films now on the market.





[NOTE 15]



She screamed “Nong qua, Nong Qua!” (“Too hot, Too hot!”)
when he photographed her running past him.

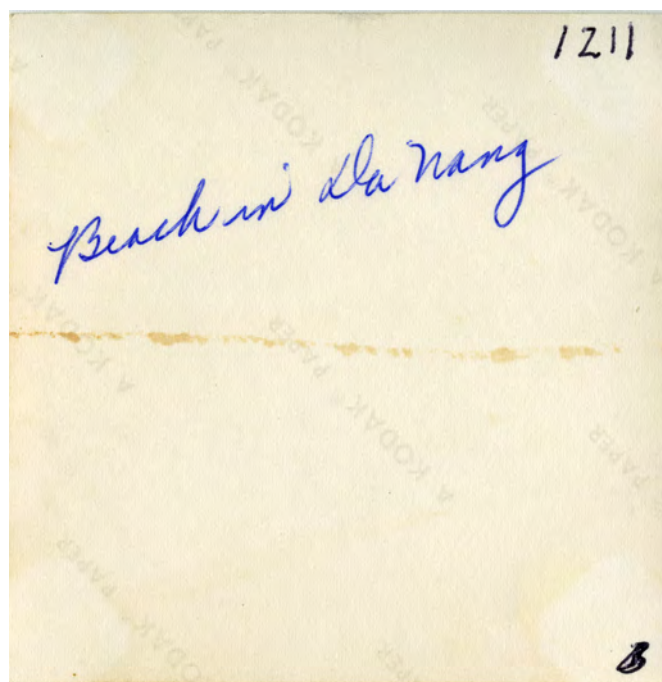
(previous page) Marget Long, *Stills from Kodak Television Commercial* (1967),
Inkjet Print on Archival Paper, 13 x 19 inches, 2010.

(this page) AP Photo/Nick Ut, June 8, 1972.
Published in *Life, Special Double Issue: Year in Pictures*, December 29, 1972.



[NOTE 16]

Marget Long, *Nikon F on Ice # 1*, (Dirty snow on Third Avenue, Camera with Bullet Hole, War Remnants Museum, Ho Chi Minh City), Inkjet Print on Archival Paper, 13 x 19 inches, 2010.



Winterize your camera.

Install a Sylvania Blue Dot Flashcube. It lets you take pictures inside when it's too cold or gray to take pictures outside.

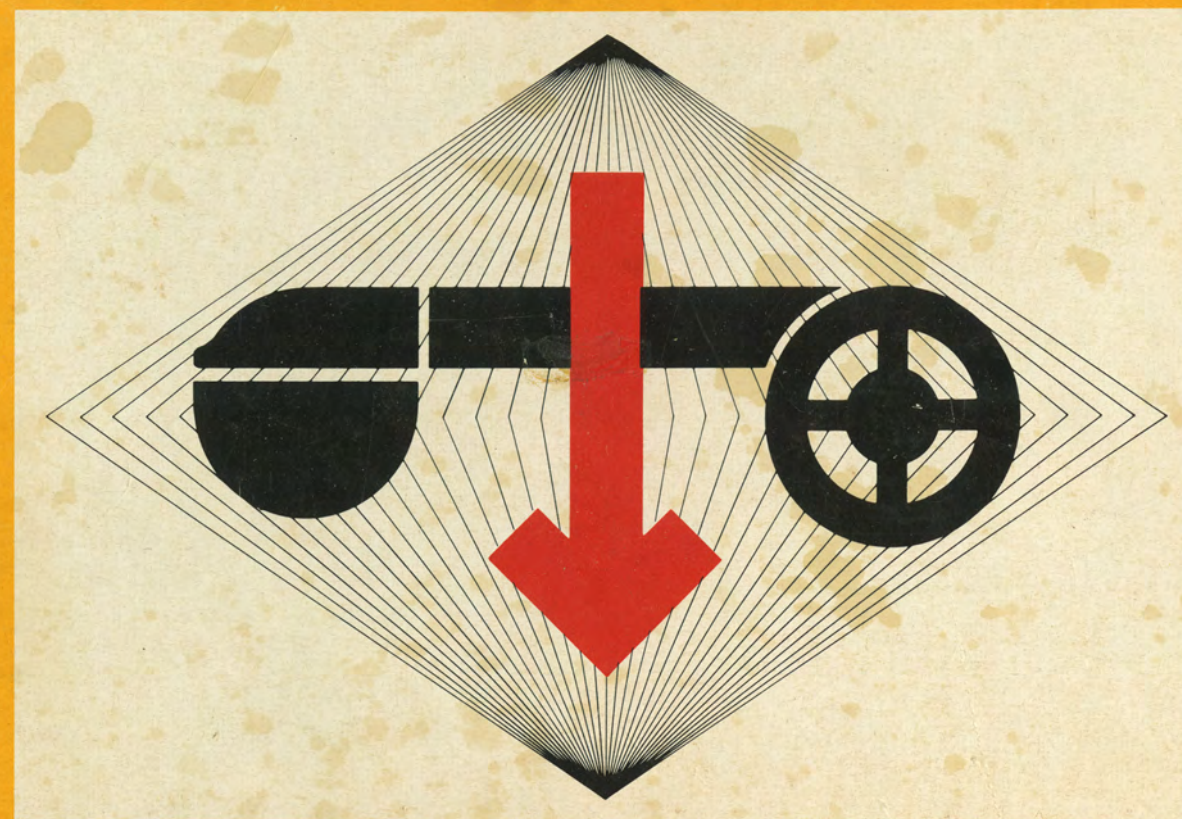
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GENERAL TELEPHONE & ELECTRONICS

[NOTE 17]

"Beach in Da Nang," back of Soldier's photograph, circa 1968.

Life, November 22, 1968.

Kodak

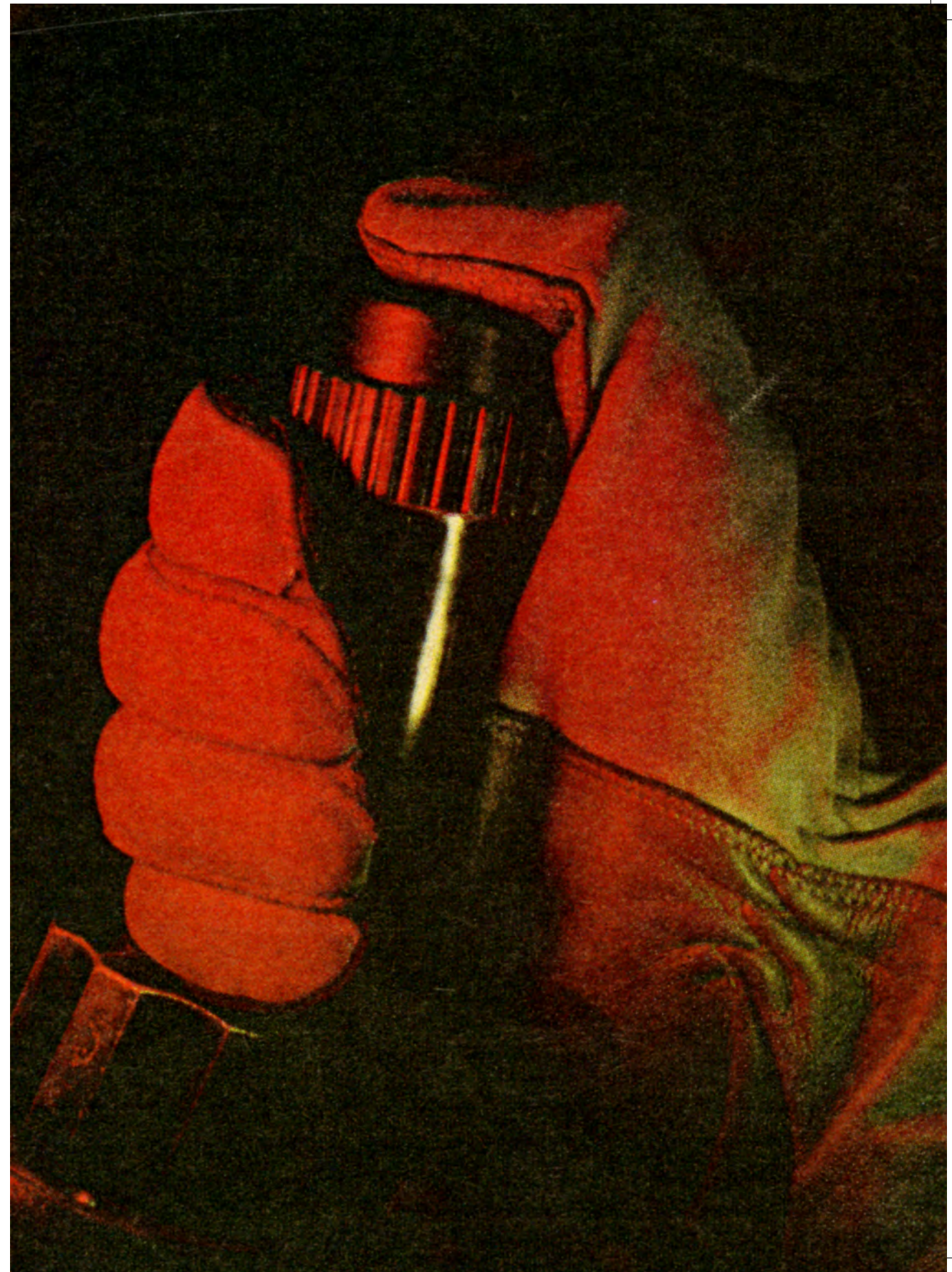


INSTAMATIC 104 / **OUTFIT**



Marget Long, *How to Win a Photo Contest in 1970*,
Inkjet Print on Archival Paper, 13 x 19 inches, 2011.

Life, B-52 Trigger, April 28, 1972.





Sylvania Lighting Center, Danvers, Mass. 01923



More Mother's Day pictures
are taken with
Blue Dot Flash than with
all other brands combined.

Don't get caught without them.

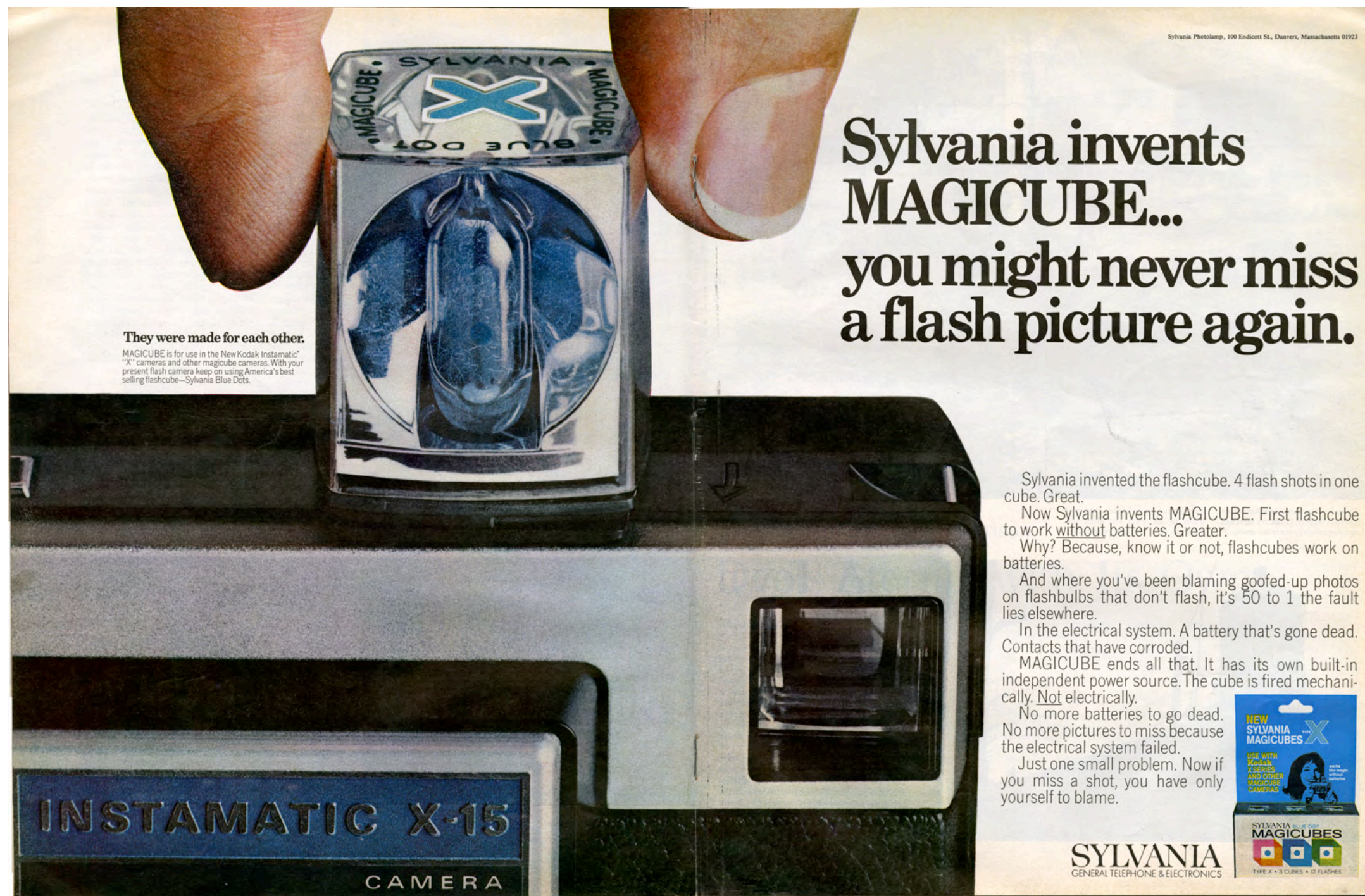
Remember, Blue Dots
for sure shots.

Blue Dot Flashbulbs
and Flashcubes.



GTE SYLVANIA

Sylvania Photolamp, 100 Endicott St., Danvers, Massachusetts 01923



They were made for each other.
MAGICUBE is for use in the New Kodak Instamatic® "X" cameras and other magicube cameras. With your present flash camera keep on using America's best selling flashcube—Sylvania Blue Dots.

Sylvania invents MAGICUBE... you might never miss a flash picture again.

Sylvania invented the flashcube. 4 flash shots in one cube. Great.
Now Sylvania invents MAGICUBE. First flashcube to work without batteries. Greater.
Why? Because, know it or not, flashcubes work on batteries.
And where you've been blaming goofed-up photos on flashbulbs that don't flash, it's 50 to 1 the fault lies elsewhere.
In the electrical system. A battery that's gone dead. Contacts that have corroded.
MAGICUBE ends all that. It has its own built-in independent power source. The cube is fired mechanically. Not electrically.
No more batteries to go dead. No more pictures to miss because the electrical system failed.
Just one small problem. Now if you miss a shot, you have only yourself to blame.

NEW SYLVANIA MAGICUBES
USE WITH KODAK X-SERIES AND OTHER MAGICUBE CAMERAS

SYLVANIA
GENERAL TELEPHONE & ELECTRONICS

TYPE X • 3 CUBES • 12 FLASHES

(previous page, right) *Life*, April 28, 1972.

(previous page, left) *Life*, April 28, 1972.

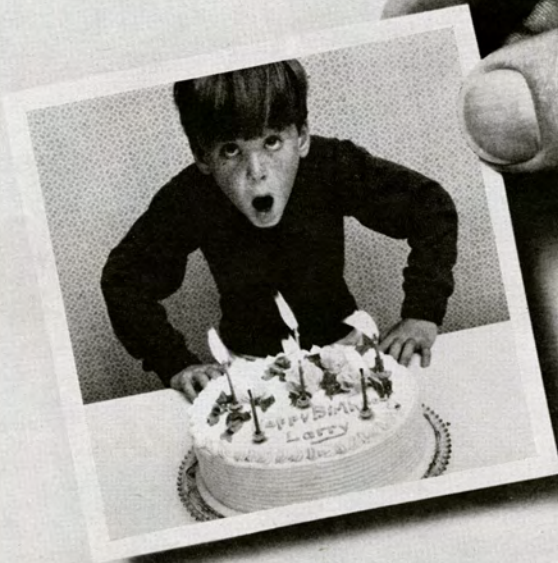
(this page) *Life*, November 6, 1970.



(this page) AP Wirephoto, Vietnam, February 5, 1966.

(next page, left) *Life*, May 26, 1972.

(next page, right) "China Beach, Danang," Soldier's photograph, photographer unknown, 1967.



More breathtaking pictures are taken
with Blue Dot Flash than
with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



GTE SYLVANIA





Spend a milder moment with Raleigh.

Highest quality tobaccos—specially softened for milder taste.

You won't forget those milder moments if you take this Kodak Instamatic camera along. It's yours for free B&W Raleigh coupons, the valuable extra on every pack of Raleigh.

To see over 1000 gifts, write for your free Gift Catalog: Box 12, Louisville, Ky. 40201.



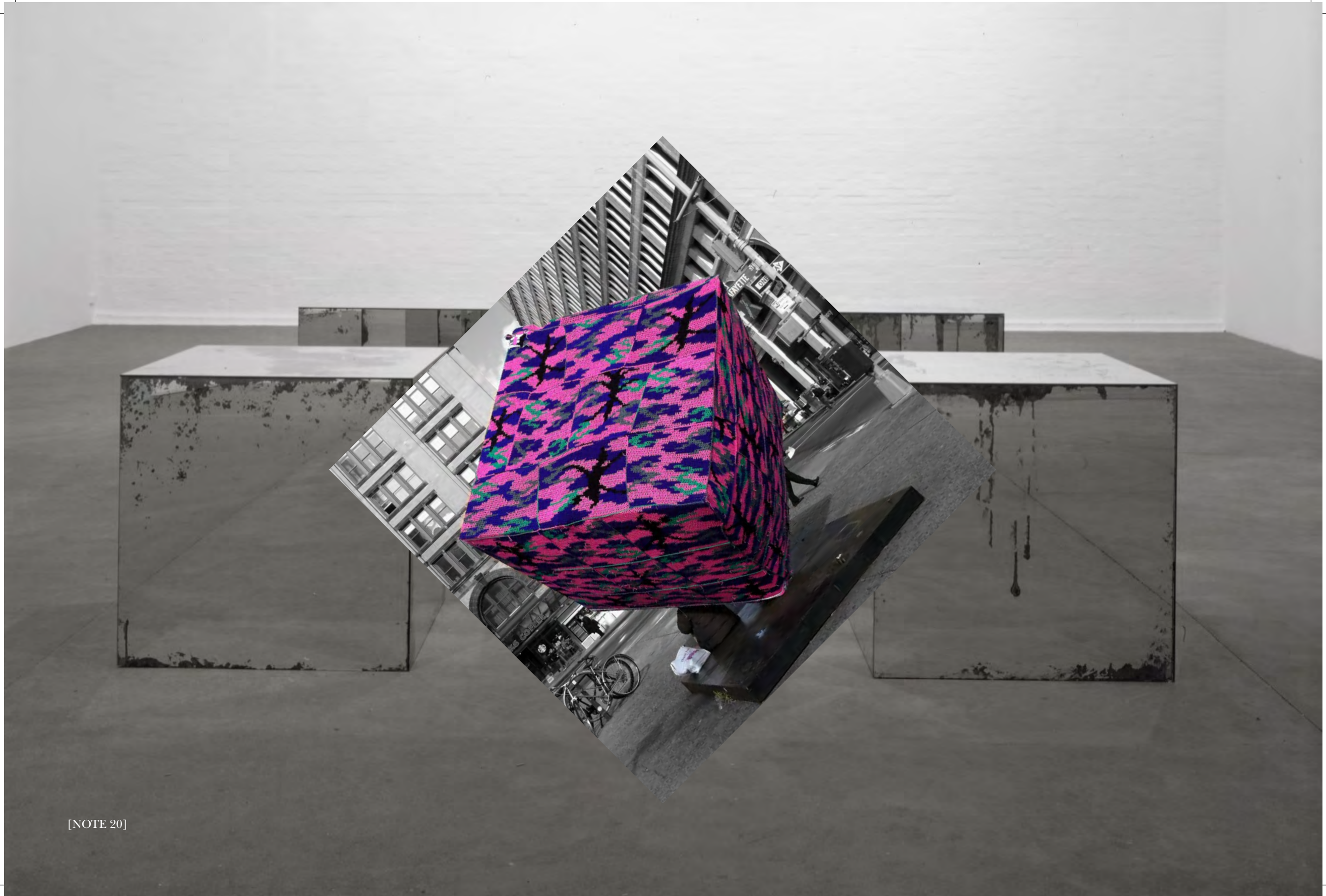
Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health

Filter Kings, 17 mg. "tar," 1.3 mg. nicotine, Longs, 19 mg. "tar," 1.5 mg. nicotine, av. per cigarette, FTC Report August '72

© 1972 BROWN & WILLIAMSON TOBACCO CORP.

Life, Special Double Issue: Year in Pictures, December 29, 1972.

(next page) Marget Long, *Cubes*, (Olek's crocheted cover for "The Cube," New York City, 2011, Robert Morris's *Untitled (Mirrored Cubes)*, 1965), Inkjet Print on Archival Paper, 13 x 19 inches, 2011.



Sylvania Lighting Center, Danvers, Mass. 01923



More stars are photographed
with Blue Dot Flash than
with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



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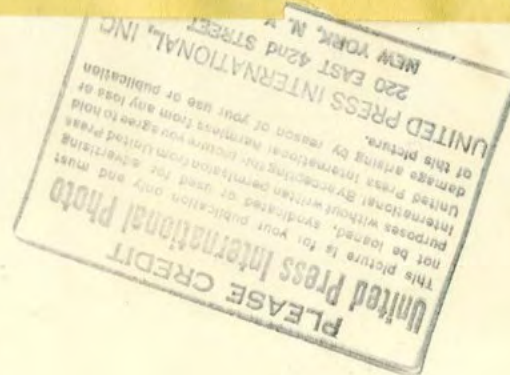


SGP 1228106 UNIPIX/PREMIUM

TAKING IT EASY

PREK TAMEAK, CAMBODIA: While South Vietnamese soldiers visit with their families, this trooper from a Mike force battalion stationed in the Prek Tameak areas of Cambodia seems to enjoy relaxing by himself on a make-shift hammock.

NY 1-2-3 PS SEE (SGP 105)
CREDIT (UPI PHOTO BY CHAU VAN NAM) 12/28/70 em



(this and previous page) UPI Photograph, front and back, December 28, 1970.

(next page, left) *Life*, December 29, 1972.
(next page, right) *Life*, April 28, 1972.



More sexy pictures are taken
with Blue Dot flash than
with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



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Six-step inverted pyramid "defies gravity"



Owner and general contractor: F. D. Rich Company, Inc.; architect: Victor H. Bisharat, AIA; structural engineer: Werner Jensen of Werner Jensen and Adams; fabricator and erector: New England Iron Works

DEFENSE



Helping keep America tough is a growing part of our business. That's partly because we treat military necessity as a personal obligation. And also because our research and manufacturing subsidiaries have developed a talent for making unique theories work out in hard

practice. ■ In fact, the electronic systems we originate and produce for national defense quite often mark new milestones in military technology. ■ More reason for the dynamic and continuous growth of GT&E.

Sharing greatly in America's growth

GT&E

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More monstrous pictures are taken
with Blue Dot Flash
than with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



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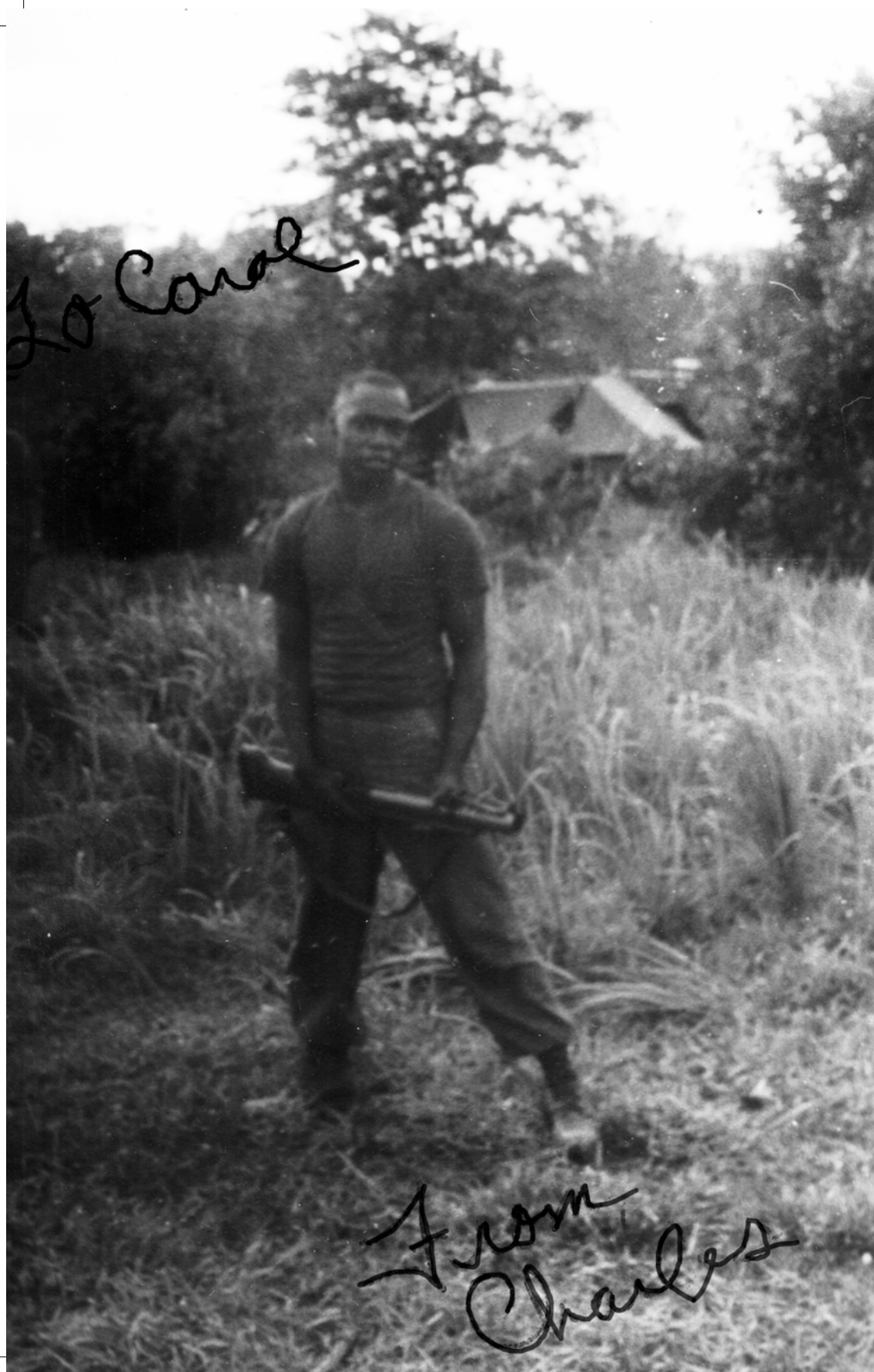
KODAK INSTAMATIC® 104 CAMERA

Marget Long, *How to Win a Photo Contest in 1971*,
Inkjet Print on Archival Paper, 13 x 19 inches, 2011.



(two previous, left) *Life*, September 22, 1972.
(two previous, right) Marget Long, *Bomb Crater, Củ Chi Tunnels Tourist Site, Vietnam*, 2010.

Helicopter Crash, Soldier's photograph, Vietnam, 1969.



More bridal pictures are taken
with Blue Dot flash than
with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



GTE SYLVANIA



With this one exception, GT&E provides total illumination

General Telephone & Electronics brightens just about everything you can think of not under the sun. Buildings, ball parks, golf courses, airports, highways and byways... and, of course, the home.

We do it with over 6,000 different kinds of lamps produced by Sylvania, a member of GT&E's family of companies. One lamp so

small that you can pass it through the eye of a needle. And another, in the form of flexible tape, that can be twisted and coiled.

And we're casting new light on light itself. Including a new red phosphor for color TV picture tubes that makes pictures far brighter.

We're also doing brilliant things with "non-light" in the infrared and ultraviolet spectrums, and applying these out-of-sight radiations to painting, baking, plant growth, germ control and night-time detection.

In creating new ways to use light, GT&E is contributing to the safety and convenience of the total community.

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[NOTE 23]

Forbes, January 1, 1966.

(previous, left) Soldier's photograph, "To Carol From Charles," date unknown.

(previous, right) *Life*, May 28, 1971.

(next, left) *Life*, September 22, 1972.

(next, right) Soldier's photograph, location unknown, 1970.

Sylvania Lighting Center, Danvers, Mass. 01923



More pictures of thanks being given
are taken with Blue Dot Flash
than with all other brands combined.

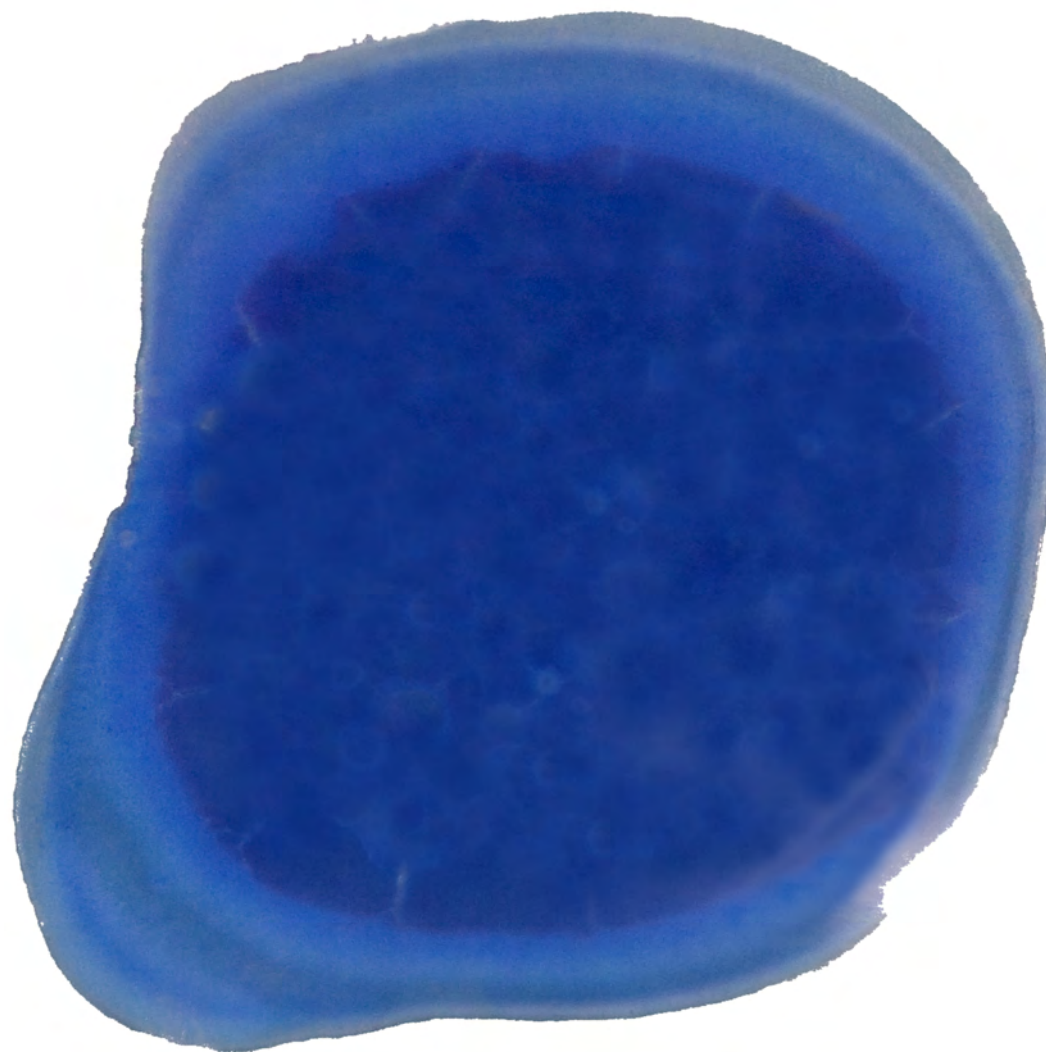
Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



GTE SYLVANIA







[NOTE 25]

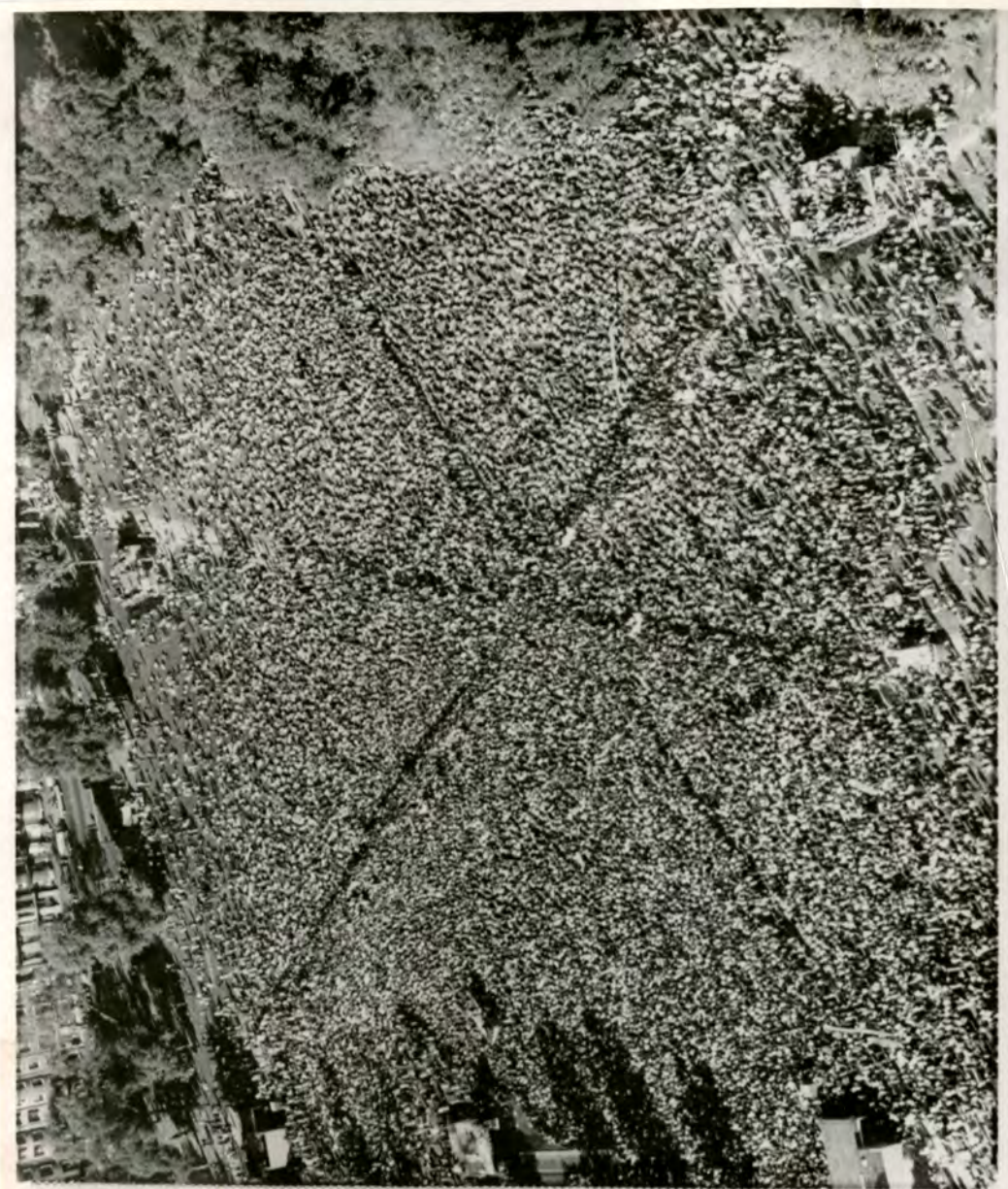


(previous page) "Big Shot" mass flash promotional photo by Sylvania Photo Lamp Division.
 New York Stock Exchange, 1957.

(this page) Marget Long, *Telecommunicating*, Photomontage, 10 x 14 inches, 2010.



New View Picture Cube, Promotional photo of girl in bikini and author photo, circa 1972.



(BX15) BOSTON, OCT. 15--DEMONSTRATORS CROWD BOSTON COMMON--Aerial view of crowd estimated by police at 90,000 which thronged onto Boston Common Wednesday to attend rally in observance of Vietnam Moratorium Day. The antiwar protestors had marched from college's in the Greater Boston area. (APWIREPHOTO)(jdk41818str)69



Flash grenade thrown by police into the crowd of activists, Occupy Oakland.
Still from a YouTube video posted by "pquegg," October 26, 2011.

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More incriminating pictures are taken
with Blue Dot flash than
with all other brands combined.

Remember, Blue Dots
for sure shots.

Blue Dot Magicubes
Blue Dot Flashcubes
Blue Dot Flashbulbs



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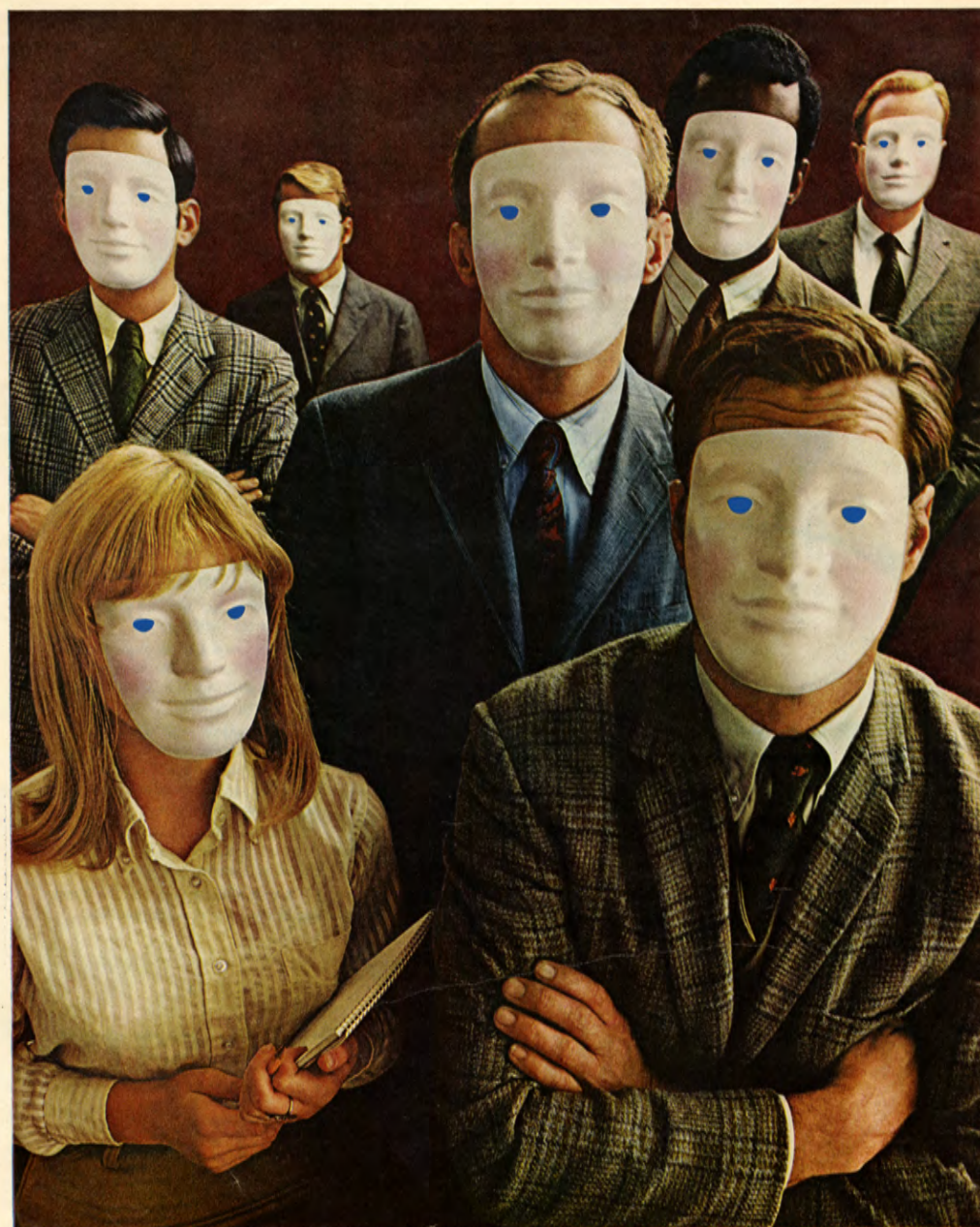




(previous page, left) *Life*, July 28, 1972.
 (previous page, right) UPI photograph, April 28, 1972.



Marget Long, *Nikon F on Ice # 1*, (Dirty snow on Third Avenue, Camera with Bullet Hole,
 War Remnants Museum, Ho Chi Minh City),
 Inkjet Print on Archival Paper, 13 x 19 inches, 2010.



Do you have to give up your identity to make it in a big corporation?

You've heard the stories:

One big corporation forbids you to wear anything but white shirts.

Another says it wants you to be "creative"—and gives you a 4-pound rule book telling you exactly how to do it.

Yet another doesn't want you to buy a more expensive car than your boss because "it wouldn't look right".

Is this really happening in American business?

Have companies become so rigid and

fossilized that they're scared of people who don't fit the "norm"?

Not this company.

We are not hung up on trivia like that.

The advances General Telephone & Electronics has made didn't come from people hiding behind organization charts and smiling at the right time.

They came from people who used their brains:

People who revolutionized picture-taking with the Sylvania flashcube,

who developed the high-energy liquid laser, who came up with the sharpest color TV picture in the world, who pioneered instant electronic stock market quotations, and so on.

We are looking for more people like this—people who aren't afraid to stand up and try themselves out.

We are an equal opportunity employer:

All you need to make it with us is a good head on your shoulders.

General Telephone & Electronics





15. Fossil. This represents a bad shadow which disturbs the formal clarity of the subject. It is a common defect of many pictures made in artificial light; the eye “follows” the line and form of the subject and perceives color differences, but unless accurate visualization is practiced, bad “mergers” such as this will occur. Shadows may be *useful*, but they should not obscure form.

The cannonballs are gone, but the ground is littered with very tiny snail shells on what is called ‘Shell Hill’ in many accounts from the Crimean War. The snails, oddly enough, made me feel connected to history.

Errol Morris, *Believing is Seeing (Observations on the Mysteries of Photography)*, 2011

(previous page) Carolyn Dinshaw, *Great White Shark Seen in Danang*, 2010.

(this page) Ansel Adams, *Artificial Light Photography*,
Basic Photo Series (New York: Morgan & Morgan, 1956).



(NY15-April 28)EXPLOSION AFTERMATH--A soldier watches a huge smoke ring in the blackened sky over the U.S. Air Base at Da Nang, South Vietnam, yesterday, following the explosion of a nearby ammunition dump. The blast destroyed several hundred tons of ammunition, killed one American Marine and a Vietnamese child and injured about 75 persons. (AP Wirephoto via radio from Saigon)(See AP Wire Story) (rb20715str)1969.

75



[NOTE 27]

Paris Hilton, AP Photo/Nick Ut, June 8, 2007.



[NOTE 28]

Presidential Palace (now Reunification Palace),
Ho Chi Minh City, Vietnam, circa 1970. Photographer Unknown.



PAVN Tank Smashing Through Gates, Presidential Palace,
Saigon, Vietnam, *The New York Times*, April 30, 1975.

SEE RED.



If you try to take a flash picture with a used-up magicube, you see a red warning signal through the big, bright viewfinder of your Kodak Instamatic X camera.

So you don't have to worry about missing flash pictures. You don't have to worry about flash batteries, either. All Kodak Instamatic X cameras take flash pictures without them. You just drop in the film, pop on a magicube, and flash away. The X-45 model also gives you automatic film advance, an automatic electric eye, and an easy setting for sharp close-ups.

Less than \$58. Other Kodak Instamatic X cameras from less than \$21.



KODAK MAKES YOUR PICTURES COUNT.

Kodak

Prices subject to change without notice.





First edition of *Liberated Saigon*, AP Wirephoto, May 23, 1975.



Time, May 12, 1975.



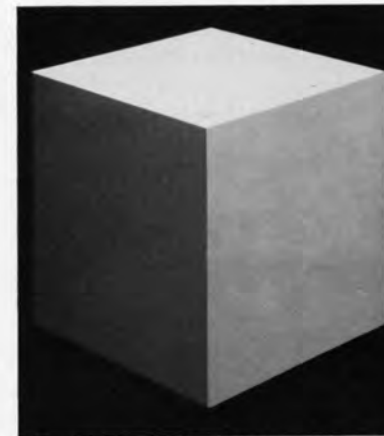
Centerville, South Dakota, December, 1975. Photo courtesy of Craig Christiansen.



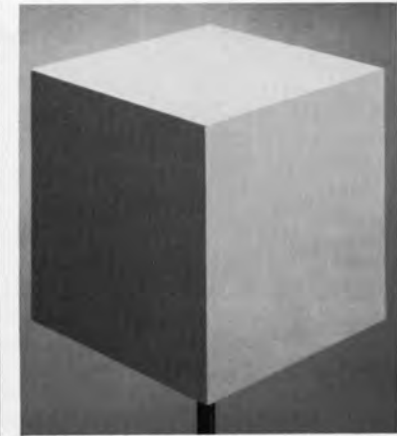
Marget Long, *Beauty Contestants at Reunification Palace*,
Source photo, Reunification Palace photo collection, photographer unknown,
Ho Chi Minh City, Vietnam, 2010.



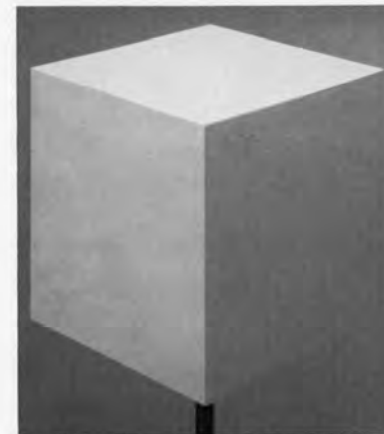
Marget Long, *Replica of the Tank That Crashed the Gate*,
Reunification Palace, Ho Chi Minh City, 2010.



13a. Sidelighting of cube about the same as in Figures 11a and 11b, but "top" light applied from spotlight, which gives a Zone IX value. As Zone IX represents pure white in the print, any "glare" or direct reflections would not be seen above the general high level of tone, but would appear above a general Zone VIII value. Hence, if glare is desired, place "ground" value on VIII.



13b. This represents a variable background—the values of the right-hand part of the background approach those of the left-hand side of the cube, and vice versa. This suggests a means of achieving tonal contrast without exaggerating the values of the subject itself. The rather light top of the cube is almost too close in value to the left side background and weakness of form results.



14a. This illustrates an almost total merger of subject and background value (right side of cube and background). Frequently, merging areas may have the same *brightness*, but different *color*, and the eye enjoys a distinction between them which black-and-white photography may fail to capture. Viewing the subject through a Wratten No. 90 Filter will usually reveal such mergers of values.



15. Fossil. This represents a bad shadow which disturbs the formal clarity of the subject. It is a common defect of many pictures made in artificial light; the eye "follows" the line and form of the subject and perceives color differences, but unless accurate visualization is practiced, bad "mergers" such as this will occur. Shadows may be *useful*, but they should not obscure form.



Marget Long, *1975*, (Kodak's Creative Darkroom Techniques Cover Art, Golden Grenade Candle, Flashcube Advertisement), Archival Inkjet Print, 13 x 19 inches, 2010.
(next page) Marget Long, *Ho Chi Minh City*, Vietnam, 2009.



[NOTE 29]

PATENTED FEB 27 1970

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FIG. 1

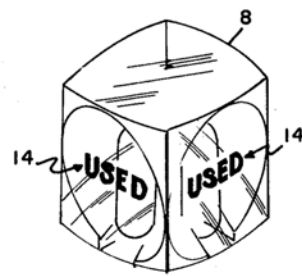


FIG. 2

JOHN W. SHAFFER
THOMAS B. McDONOUGH
INVENTORS
BY *Edward Coleman*
ATTORNEY

(left) Flashcube Patent Application Diagram, United States Patent and Trademark Office, 1970.
(right) Marget Long, Nguyễn Văn Thiệu's Mercedes/GTE Phones, Photomontage, 20 x 16 inches, 2009.



ENDNOTES

1. In the summer of 1965 at a joint press conference at the Waldorf-Astoria Hotel in New York, GTE Sylvania and the Eastman Kodak Company unveiled a revolutionary new product called the “flashcube.” The one-inch, light-transmitting plastic cube enclosed a tiny flash bulb and reflector in each of its four sides and was described as, “in effect, a repeatable, self-contained, disposable flashgun.” The flashcube was made for amateur use with a new line of Kodak Instamatic cameras; it was designed to stay cool to the touch and prevent the “burns and misfires” of its predecessors, bulky and unpredictable open-faced flash units.

The announcement made big news on Wall Street. Both GTE’s (Sylvania’s parent company) and Kodak’s stocks surged that day. GTE Sylvania introduced the “Magicube” five years later, updated with “blue dot technology” and a mechanical trigger pin to further reduce the “millions of pictures lost to misfires each year.” Gene Smith, *The New York Times*, 18 July 1965, p. 23 and 25 June 25 1970, p. 67.

In 1967, GTE Sylvania hired Doyle Dane Bernbach (DDB) to market its consumer products and remake its corporate identity. This advertisement’s dark imagery (hand rising from the grave) and self-deprecating tone (3 flops) were characteristic of DDB’s marketing style and strategies. Bill Bernbach and his team pioneered the use of wry humor in the campaigns for Volkswagon (“Think Small”) and Avis (“We’re #2, We Try Harder”). GTE worked with DDB until 1985. Philip Gold, *Advertising, Politics and American Culture* (New York: Paragon House Publishers, 1987).

2. The flashcube was not the first large-scale collaboration between Kodak and Sylvania. During World War II, the companies joined forces to make the proximity fuse, a radio device that directs a warhead to fire when it gets close to its target rather than detonate at a specific time. Sylvania ultimately produced more than six million fuses during the World War II. Edward A. Sharpe, “The Radio Proximity Fuse: A Survey,” *Vintage Electrics* Vol 2, No. 1 (2003).

3. This building in midtown Manhattan was GTE’s corporate headquarters from 1959 until 1973, when the company and six of its subsidiaries moved to a new “world headquarters” in Stamford, Connecticut. GTE decided to leave the city shortly after their midtown offices were bombed by anti-war activists in 1970. In Stamford, GTE spearheaded a contentious “futuristic downtown revitalization” whereby thousands of houses were razed to make room for GTE’s fortress-like, glass and steel building. F. D. Rich Co., the project’s developers, were widely criticized for eliminating historic buildings and creating pedestrian-unfriendly streets. In 1999, reflecting on the criticism, Frank Rich said, “The streets were never meant to be for pedestrians. GTE came here because they were bombed in New York. Crime was a problem in the city. That’s why the buildings were designed to be impenetrable.” Eleanor Charles, “Commercial Property/Stamford, Conn.: A Pioneer Business Park That Confounded Critics,” *The New York Times*, 26 September 1999.

4. Ansel Adams saw light as a “substance like a rock or flesh” to be evaluated and interpreted. Light, then, was both as dead as a rock and alive as a human body. Was the cube—the form that he used in his artificial lighting diagrams—dead or live matter for Adams? Did he view its flat surfaces as particularly well suited for observing light, like the side of one of his rock faces in Yosemite? Or would the cube have been simply an in-vogue modernist object onto which Adams could project his rigorous lighting schemes? Is it also possible that the cube was for Adams something more mysterious—an entity as commonplace yet enigmatic as light itself. Ansel Adams, *Artificial Light Photography*, Basic Photo Series (New York: Morgan & Morgan, 1956).

5. By the late 1960s, GTE was a complex multinational corporation that made massive telecommunication systems. With the exception of Sylvania’s televisions, lighting and radios, GTE produced surprisingly few consumer products and, as a result, had a serious corporate identity problem. Despite a

ENDNOTES continued

strong retail presence, the public wasn't aware of the full scope of their business activities. Meanwhile their main rivals, AT&T and General Electric, spent millions touting their global projects and projecting the image of benevolent corporate citizens. DDB was hired to correct this problem and to reach GTE's targeted audience, affluent adult males. They placed many ads similar to this one in popular science magazines and business periodicals. Here DDB links the flashcube—“its beautiful invention”—to GTE's “family of companies.” Nancy Condry, “GTE: GEE! No GTE Campaign,” *Encyclopedia of Major Marketing Campaigns*, Vol. 1, 2000.

GTE's corporate history is long and complicated by deregulation and the rash of mergers of the 1980s and 1990s. It sold its consumer electronics businesses, including the brand names of Philco and Sylvania in 1980. In 1984, GTE formalized its decision to concentrate on three core businesses: telecommunications, lighting and precision metals. That same year, GTE launched its first satellite and GTE's cellular telephone service went into operation; GTE's earnings exceeded \$1 billion for the first time. Bell Atlantic merged with GTE in 2000 and named the new entity Verizon Communications. GTE Sylvania's lighting division still exists as Osram Sylvania and is owned by Siemens AG, a multi-national conglomerate. <http://en.wikipedia.org/wiki/GTE>; http://en.wikipedia.org/wiki/Sylvania_Lighting

6. This couch, round as a roulette wheel, sits inside the casino at Reunification Palace, the former home and workplace of Nguyễn Văn Thiệu, avid gambler and puppet President of South Vietnam from 1965 to 1975.

7. The Sylvania flashcube is six-sided and made of injection-molded plastic. Small and light-weight, it's not a perfect cube. The sides (about one and a quarter inches long) are slightly longer than they are wide. The face of each of the flashcube's four fronts has an oval window of transparent plastic. Inside the windows, behind the transparent plastic, is a four-sided mirrored plastic reflector set on a base-plate.

At the center of each reflector is a bulb filled with a tangle of fine, combustible zirconium wire. Visible near the center of the bulb is a spot of bright blue, paste-like dye. When the cube is unused, this dot is visible. When fired, the “blue dot” burns away; the bulb's interior melts, becomes misshapen and lumpy—a miniature, detonated landscape. The top of the flashcube reveals a circular etching of the sun's rays with an aqua-blue dot at its center. The sun looks hand-drawn and primitive, like a hieroglyphic. In bold black typeface the words “sylvania flashcube” encircles the picture of the sun.

8. The ties between warfare, weaponry and photographic flash are long and historic. Some of the earliest flash photos were made with “flash pistols” that looked and operated exactly like ordinary handguns. In 1939, Harold Edgerton (known to his students at M.I.T. as “Papa Flash”) published his spectacular photographs of firing guns and flying bullets. Shortly thereafter, Edgerton was enlisted by the Army's photographic lab to develop a nighttime, flash-based reconnaissance system that could work from an airplane flying at high altitudes. (During World War II, the government's demand for photo flash units was so great that flash became, for civilians, a rare commodity.) On the basis of his success with these technologies, the Atomic Energy Commission hired Edgerton and his company, EG & G, to record the biggest flashes of all, the nuclear tests performed by the government throughout the 1950s and 1960s. See Arthur Palme, *Speedlights Construction and Use* (Boston: American Photographic Publishing Company, 1946).

9. Flash photographs are strange photographs. This strangeness, art historian Peter Geimer points out, is most apparent when the subject's bodily time is out of sync with the “time of the photograph.” That lag is highlighted here in two magnesium flash photographs by Albert Londe, who experimented with flash at the Paris mental hospital, La Salpêtrière, in the 1890s. The upper image records the fraction of a second after the flash has fired but *before* the

body has had time to react; before the eyes



Photographs,” *Science in Context*, 17, 2004: 467-501.

The eerie, disembodied quality of Jacob Riis's tenement photographs likewise has been attributed to his haphazard use of magnesium flash powder. Many of his iconic photos were made in the middle of the night in total darkness. There were no niceties or preliminaries: Riis and his posse of photographers (his “raiding party”) lit the scene by tossing a match into a frying pan of flash powder. Riis's subjects were suddenly confronted with a violent explosion; their blank stares and stiffened bodies were indelibly linked to the history of 19th century tenement life in New York City. See Yochelson & Czitrom, *Rediscovering Jacob Riis. Exposure Journalism and Photography in Turn-of-the Century New York* (New York: The New Press, 2007).

10. Before the “lightning wars” waged with these large, aerial flash installations, Paul Virilio identified what he called the “lighting wars”—tracer bullets, flares that lit up nocturnal targets, and powerful banks of searchlights—used in warfare at the start of the twentieth century. Paul Virilio, *War and Cinema, The Logistics of Perception* (London: Verso Press, 1984), p. 88.

11. This aerial image of Haiphong Island's amphitheater was part of a multi-page photo illustration entitled “The Bombing Pause—Why It's Not Total.” The photographs were used as evidence to support President Johnson's

decision not to completely halt bombing in Vietnam in 1968. The caption reads: “These photographs offer startling proof of the fast-improving sophistication of the enemy's supply system. The pictures were taken over North and South Vietnam by U.S. Air Force jets using new ultrasensitive cameras to record details that escape the human eye. The U.S. classified Haiphong's island amphitheater as a ‘cultural center’ and has not bombed it. This photo... shows it being used as a sanctuary for 50 Soviet-made trucks.” *Life*, 12 April 1968, p. 38.

12. In 1936, publisher Henry Luce reinvented *Life* magazine by giving pictures new status over texts. The formula—50 glossy color photos with text condensed into captions—was incredibly successful. From that time forward *Life* was closely tied to the practice of photography, particularly through the work of its all-star cast of photojournalists. By the 1960s and 1970s, the magazine provided readers a steady diet of photos reporting on popular culture (the Kennedys, movie stars, etc.), technology (the Apollo space program) and the war in Southeast Asia. But despite winning the National Magazine Award in 1967, *Life*'s subscriptions declined from 1969 onward. This was, at least in part, due to reader burnout with images of death and loss in Vietnam. The magazine shut down as a weekly in December 1972 and published only special issues like *The Year in Pictures* after that time. Dora Jane Hamblin, *That Was the “Life”* (New York: W.W. Norton & Company, 1977).

Beginning in the late 1960s, Sylvania, Polaroid and Kodak began to capitalize on the photographic aspirations of *Life*'s readers. These companies spent vast sums advertising their latest cameras and accessories in the magazine. The hope was that photo viewers would also become photo producers, requiring the purchase of new, easy-to-use equipment. *Life*'s editors did their part in fostering this consumer demand as well. In 1970, they reintroduced national photo contests, featuring high-profile judges like Ansel Adams. These immensely popular contests directly engaged millions of readers in the aesthetics of

ENDNOTES continued

photography. The magazine's non-advertising content also promoted new photo technologies. In 1972, for example, *Life* dedicated its cover and a feature story to Polaroid's Dr. Edwin Land: "A Genius and His Magic Camera."

13. A Note From the Photo Judges: "Last fall, we considered ourselves inundated when we had to cope with the half a million pictures submitted in our 1970 photographic contest, the first such competition we had run in 19 years. Nevertheless, in the same Year End issue in which we published the winners of the 1970 contest, we announced a new contest for the first part of 1971. This one, we believed, would be on a much smaller scale: it was limited to amateurs only, had a duration of three months rather than six, and offered less prize money. But as it turned out, we received *twice* as many photographs—more than a million...We found that few of the portfolios tried to tell stories or make social comment. Instead, the main themes were traditional ones for amateurs: the land, the sky, water and weather, faces, families with the emphasis on children, the human body. Many of the most interesting pictures were double exposures or images created by sandwiching two or more color transparencies together." "Winners of the Life 1971 Photo Contest," *Life*, July 9, 1971.

14. (VOICE OVER) (MINE)

Everyone thinks that I murdered my boyfriend, John, but I didn't. My father hacked him up into pieces in the pool house in 1948. That's the year my clock stopped.

It's 1964 and I'm still living in Papa's house with his heavy furniture and his portrait. I live alone, my solitude disturbed only when my sister, Olivia de Havilland, comes to visit. She wears pearls and up-to-the-minute wool suits. I wear a silk nightgown and, on a good day, look like Bette Davis in *Hush...Hush, Sweet Charlotte*.

I'm talking to Papa's portrait in the hallway when I hear someone knock, knock, knock at the front door. Ominous music is playing, so I open the door cautiously.

It's dark and all I can see outside is a glassy, oval-shaped eye. But before I can invite the eye in, he hits me with a blast of light so strong that I'm lifted off my feet. The light wave carries me backwards, feet first, past the portrait and the blurry white knot of Papa's bow tie.

The eye leaves as quickly as he appeared. He has pictures to develop and a story to write. His effects are lasting though: the sudden airlift lands me in bed.

When I wake up, Olivia's pearls are glowing in the dark. I hear bulldozers circling outside and the grinding sound of my clock starting up.

15. The source of this photomontage is a Kodak television commercial featuring flash-frenzied dancers and cubic, M.C. Escher-worthy sets. The cube was, of course, no stranger to 1960s art, popular culture and industrial design. Designers Richard Sapper and Marco Zanuso, for example, teamed up for Brionvega S.p.A. Italy to make the plastic and aluminum cube Radio Model TS 502 (1963) and the Black 201 T.V. (1969). And Japan Victor Corporation (JVC) also manufactured its futuristic Video Capsule Television in 1974.

16. A large photograph of this shot-up camera hangs in a light box at the War Remnants Museum, which opened in Ho Chi Minh City in September of 1975. The camera belonged to Japanese war photographer Taizo Ichinose, who died when he stepped on a land mine in Cambodia in 1973. The bullet hit his camera during an earlier incident.

17. "To winterize" something means to prepare it for the long, cold months of winter—as in the case of a house, to clean out the gutters or insulate the attic. Here the advertisement suggests that winter will require the purchase and use of a flashcube. But the text could also be read more abstractly as a command to "cool" photography itself. The flashcube, in fact, looks strikingly like an ice cube. The advertisement might also imply that if you put this cool-looking device on your camera, you can take hip and cool pictures from inside your private

domestic space. Perhaps "to winterize" a camera has a less literal meaning as well. Sylvania may have been driven by corporate or political necessity to create a safe distance between their domestic photo products and the heat of a foreign war and its messy photo documentation. Camera equipment would be less desirable to consumers if it were even subliminally connected to death and a morally suspect war.

18. Kodak's line of Instamatic cameras, introduced in 1963, revolutionized amateur photography in the U.S. More than 50 million of these cameras were produced between 1963 and 1970. The cameras were inexpensive and simple to use. All of the Instamatics with the model names ending in 4 (the 104 shown here) were designed to accommodate flashcubes. A new series of Instamatics was introduced in 1970 to support Sylvania's Magicube, which introduced mechanically triggered pyrotechnic detonators, an improvement over the original flashcubes which required batteries to fire. In 1976, the Instamatic X line was updated for use with the new Flipflash system and the flashcube was phased out. Douglas Collins, *The Story of Kodak*, (New York: H.N. Abrams, 1990.)

19. Ice Cold. Beyond its modernist aesthetic, is there also a material connection between the design of the flashcube and the philosophy of communist containment that prevailed during the Cold War? (The concept of containment refers to the political theory emergent in the late 1940s that if one nation falls to communism, neighboring countries would fall as well, like dominoes. Communism, it followed, would spread uncontrollably without proper barriers.) The atomic bomb, of course, figured centrally in this narrative: unlike conventional weapons, radiation could contaminate and destroy invisibly.

The flashcube, in this context, is the perfect Cold War container. Unlike its open-faced predecessors, the flashcube is impermeable: the explosion and the heat are sealed inside the plastic shell when the flash fires. The light is controlled; never misjudged or misfired.

Sylvania's advertisements tell us as much—fingers touch and hands cradle the flashcube throughout the campaigns. Yet the specter of atomic heat is also present. In the advertisement referenced in Note 12, for example, the cool-toned flashcube on the left is contrasted with the orange fireball on the right. For a provocative account of the connections between nuclearization, light, photography and militarization in the context of the Pacific Islands, see Elizabeth DeLoughrey's "Radiation Ecologies and the Wars of Light," *Modern Fiction Studies*, Fall (2009): 468-495.

20. The cube's solid, simple geometry survives as the minimal form par excellence. On October 3, 2011, New York artist Agata Oleksiak (known as Olek) crocheted a hot pink camouflage sweater onto "The Cube" by the artist Tony Rosenthal. (The 1967 sculpture on Astor Place in New York is officially titled "Alamo" but is locally referred to as "The Cube".) Olek's cube intervention was inspired by the Occupy Wall Street protesters' words, "I'm still proud of what I do for a living." She crocheted that text into the camouflage pattern that temporarily swaddled the five-ton steel cube. With the pull of her crochet hook, Olek ingeniously connected the multiple meanings of this cube at this site with the cube's wider legacy as the form most closely associated with minimalist art, as well as the sexual and cultural politics of the 1960s. I'd like to see Olek sink her crochet hooks into a Donald Judd slab cube or a Tony Smith steel cube, although her commitment to such narrowly circumscribed art historical critique is, I suspect, next to none.

21. In 1974, GTE's building engineer claimed that "since the building was symmetrical in both directions, there are no 'oddball' forces." And in the words of the building's architect, Victor Bisharat, the "inverted stepped pyramid design....reflects a 21st-century spirit and technology...a building floating in the air without any visible support, as if it's defying gravity." Bethlehem Steel, *Building Case History, No. 33: General Telephone and Electronics Corporation World Headquarters*, February, 1964.

ENDNOTES continued

22. More Monstrous Pictures. This fascinating series of flashcube advertisements ran in *Life* throughout 1971 and 1972. The quarter-page ads refer directly to upcoming U.S. holidays (Halloween, Mother's Day, Thanksgiving, etc.) and remind consumers of the photo opportunities presented by these holidays. The running joke here is created by the mismatch of image and text. The "incriminating picture" ad uses a snapshot of a man in the not-so-horrible act of raiding the family refrigerator. The "monstrous picture" shows a boy dressed for trick-or-treating. The low-key, snapshot aesthetic lightens the mood of the text while it also, quite cannily, comments ironically on the darker images in the body of the magazine, particularly the photographs of the war in Southeast Asia, which were truly monstrous and incriminating.

23. Total Illumination. In his novel, *Sunset Park*, Paul Auster describes the Florida sun as a "Machiavellian sun" that generates a light that does not illuminate things but obscures them, "blinding you with its constant, very bright effulgences, pounding on you with its blasts of vaporous humidity, destabilizing you with its miragelike reflections and shimmering waves of nothingness. It is all glitter and dazzle, but it offers no substance, no tranquility, no respite." Paul Auster, *Sunset Park*, (New York: Henry Holt, 2010), p. 7.

Can flash too be described as a kind of dazzling and cunning nothingness? David Grandy, in his writing on otherness and light, observes that light's unfamiliarity and inscrutability come from "its capacity to receive and announce other things while retreating from view as an independent entity." I would modify this claim when describing the unique phenomenological effects of photographic flash. When flash breaks into material reality it is perhaps more fully *something* than Grandy's wash of nothing: more like the distinct, linear and quickly receding flashes of a lightning bolt. Flash may indeed be even more bewitching and "other" than Grandy's light. David Grandy, "The Otherness of Light: Einstein and Levinas," *Postmodern Culture*, September (2001).

24. This is an isolated, close-up photograph of the "blue dot" painted on the bulb of a flashcube during the manufacturing process. The mark indicates the flashcube's unused status, the potential for another flash picture. The photo reveals the dot's irregular, cell-like shape—the only reminder of the human hand or body in an otherwise perfectly machine-made, mechanical object.

25. The "Big Shot" mass-flash photographs were spectacular productions orchestrated by Sylvania's photo flash division to demonstrate the importance of flash in modern photography. The first of these nighttime photo events took place in Levittown, New York to coincide with the opening of the tract-home residences in 1951. Photographer Leo Chopin took the photo from a water tower, opening and closing the camera shutter while Sylvania photo division engineers individually flashed each of the identical residences. A total of 1500 Sylvania flashbulbs were used and the photograph appeared in *Collier's* and newspapers around the country. Four other "Big Shot" photos were made by Sylvania later in the 1950s: the aircraft carrier U.S.S. Antietam; Carlsbad Caverns in New Mexico; Pennsylvania Railroad in Altoona, Pennsylvania; and the Wall Street trading floor photo reproduced here. These advertising stunts (as well as Sylvania's constant promotion of flashbulbs and other electronic products on its in-house television program, "Beat the Clock") solidified Sylvania's dominance in the U.S. photo flash market. By 1956, 590 million flash bulbs were sold to amateur photographers and more than half of them were made by Sylvania. Thomas E. McCarthy, *The History of GTE: The Evolution of One of America's Great Corporations* (Stamford, CT: GTE Publishing, 1990), p. 90.

26. Da Nang recurs as a site throughout this book. I chose this place for both historic and personal reasons. During the Vietnam War this small city in central Vietnam (just 85 miles south of the demilitarized zone), was the site of a major U.S. air base and, at the time was considered the busiest airport in the world. This is where the planes that dropped the bombs

took off and landed. Da Nang was as well the location where many U.S. troops first touched down in Vietnam. Many soldiers also spent their rest and recreation time in Da Nang's bars and on its beaches.

I was seven years old in 1968, and as far as I recall, the Vietnam War was never discussed in my household. My first direct knowledge of the war came in around 1973, when I was twelve, in the form of a guy named Paul who slept on a cot on my best friend's porch. Paul's long hair and army jackets intrigued me but I was slightly wary of this quiet man who lived in another family's house. One day, while rifling through the albums stowed near his cot, I asked Paul where he was from. He told me that he had just returned from Vietnam, from a place called Da Nang, which he said was "like hell on earth."

Today the former air base in Da Nang is an international airport and the beach is lined with high-end resorts, golf courses, marinas and "private villas." I stayed in one of these resorts with my girlfriend, Carolyn, over New Years in 2010. The hotel has an infinity pool and the grounds are lush and green. To the north of the resort the hillsides are brown. In many spots there is still dioxin in the soil and nothing but elephant grass will grow there.

While staying at the beach in Da Nang, Carolyn and I talked a lot about her friend Rod, who was stationed there in 1968. Carolyn remembered that, many years ago on a run together in the Berkeley hills, Rod told her that the sweeping beauty of the California coastline reminded him of the view of the beach at Da Nang, which he said was "the most beautiful place he had ever seen." Rod was exposed to Agent Orange while stationed in Da Nang and died of a brain tumor in 1990.

27. Heiress Paris Hilton is in tears after receiving her 23-day prison sentence in 2007. This photo by Nick Ut was taken exactly 35 years after his iconic photo of Kim Phuc. Ut said of the Hilton photo, "I was lucky to get the shot I did...I focused on her blond hair when she got out." David Hinkley, *Daily News*,

"A Far Cry from Vietnam," 12 June 2007.

28. "A visit to the Reunification Palace is like traveling back in time to the 1970s. Things at the palace were left untouched from the day Saigon fell to North Vietnam. You are free to walk around in the Palace, marvel at the James Bond-style conference rooms, the casino, and the screening room. In the basement you'll find the war rooms full of 1960s phones, radios, office equipment, maps and a shooting range! Tours are available (in English, French, Chinese and Japanese) and are free, but not necessary. A visit to the Palace is a must do in Ho Chi Minh City." <http://www.virtualltourist.com>

29. "In August I enjoyed a great holiday trip to Vietnam with four people, two with digital cameras and two shooting analog (film). Vietnam is a great place for taking pictures. There are rivers everywhere, rice fields of incredible brilliant green, Mekong Delta, Sapa Mountains, Halong Bay (Unesco World Heritage), great portraits of people working, smiling, on boats, at the market, driving scooters (there are millions of scooters!), exercising alongside the lake in the center of Hanoi. It was also surprisingly a great place to enjoy looking at photography, especially at the very moving exhibition of war photography at the War Remnants Museum." <http://1000words.kodak.cpm/thousandwords/post/?id=184869>

