

“Out of the Back Rooms”

Physician-publicist Virginia Apgar Makes Birth Defects a Popular Cause

Physician Virginia Apgar joined the National Foundation for Infantile Paralysis, the forerunner of today's March of Dimes, in 1959, a pivotal time in the non-profit's history. When the Salk polio vaccine proved to be effective in 1955, the organization created by Franklin Delano Roosevelt in 1938 to eradicate polio struggled to maintain the interest of donors and volunteers. In 1958, executives redirected the foundation's mission to focus on birth defects and arthritis. Apgar, already well known in medical circles for having created an effective method to assess a newborn's health, was hired to help manage a \$6.1 million research agenda. However, the smart, charismatic physician soon became the organization's popular spokesperson. This article uses archival records, newspaper accounts, and primary interviews to show how a physician-turned-publicist popularized the cause of birth defects and, in so doing, helped a national organization successfully rebrand itself in the second half of the twentieth century.

On April 12, 1955, car horns blared and church bells rang across the United States as Americans celebrated the good news: The polio vaccine developed by Jonas Salk and tested in field trials had proved successful in stopping the feared disease. By the end of April, approximately five million children had received inoculations.¹

The Salk vaccine deserved the jubilation. Polio, also known as infantile paralysis, was a viral disease that hit especially hard during summer outbreaks and crippled thousands of children and adults. President Franklin Delano Roosevelt, infected at age thirty-nine, never regained full use of his legs, and in 1938, founded the National Foundation for Infantile Paralysis (NFIP), the forerunner of today's March of Dimes, to lead the fight against polio.² Annual campaigns gathered small contributions from millions of donors, financing medical care for polio patients, professional education, and scientific research.



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However, in 1955 as polio vaccinations made the front pages nationwide, the NFIP raised only \$52.5 million,³ down from its 1954 peak of \$64 million.⁴ The decrease signaled a downward trajectory that National Foundation executives saw coming as early as 1951, when Salk began developing a polio vaccine. Conquering polio meant the organization met the mission FDR had created it for. What would become of its 3,100 chapters nationwide, the 80,000 volunteers harnessed to the polio fight?⁵ The organization needed a new goal. Or it needed to close.

Successful organizations do not shut down easily, and the NFIP was no exception. In July 1958, Executive Director Basil O'Connor held a press conference at the Waldorf-Astoria Hotel in New York City to announce an expanded program that included arthritis and birth defects and the organization's shortened name of National Foundation.⁶

With the organization's new mission in place, O'Connor sought expert help in the area of birth defects, and he made a fortuitous choice for the National Foundation and the nation's children. He hired obstetrical anesthesiologist Virginia Apgar, who in 1952 had introduced a method of assessing the health of newborns that came to be known as the Apgar score. By the time she joined the National Foundation, the test was standard practice in obstetrical units and had cemented Apgar's reputation among medical professionals.

Apgar was hired was to help manage a \$6.1 million research agenda,⁷ but the smart and witty Apgar soon became the

organization's popular spokesperson. Journalists sought out the grandmotherly expert who explained medical jargon in everyday terms and offered colorful quips. Callers swamped television and radio stations' switchboards when Apgar was a guest on talk shows. As *Chicago Tribune* columnist Joan Beck wrote after Apgar's death: "With her medical prestige and her compassion, Virginia Apgar probably did more than any other physician to bring the problem of birth defects out of the back rooms."⁸ Passionate, energetic, and often outrageous—she enjoyed telling the occasional shocking joke and took with her to presentations an eight-week-old fetus she named Billy that had a visible defect—the scientist Apgar was an enormously effective spokesperson for the National Foundation.⁹ At her memorial service in 1974, the chairman of medicine at the Johns Hopkins University School of Medicine said in his eulogy, "She was an emissary from the laboratory to the public and from the public to the laboratory."¹⁰ Like other scientists such as Barry Commoner and Margaret Mead who took their messages directly to the public, Apgar was one of the twentieth century's "visible scientists."¹¹

This article explores Apgar's career with the National Foundation from 1959 to 1974. Medical historians have documented Apgar's contributions to anesthesiology, perinatology, and teratology, and her numerous awards in those fields.¹² Laymen have also lauded her work: *Ladies Home Journal* named her a 1973 Woman of the Year, and the U.S. Postal Service honored her posthumously with her portrait on a 1994 stamp. But no scholars have examined her perceptive use of communications media to advance public health. The author used archival records, newspaper accounts, and primary interviews to show how this physician-turned-publicist popularized the cause of birth defects and, in so doing, helped a national voluntary health organization successfully rebrand itself.

The study of Apgar's role as a publicist—a term with various connotations but defined here as a well-respected professional, not necessarily a journalist, who employed media strategies to shape and influence public opinion—is significant for it helps counter the dominant narrative of public relations history as corporate-focused. Scholars suggesting a new model of public relations history point to the need for more investigation of the ways in which nonprofit organizations and women contributed to modern public relations practice.¹³ The post-World War II era saw an explosion in public relations activities in corporate, government, and nonprofit sectors.¹⁴ The consumer economy was booming and so were charities. A 1960 Rockefeller Foundation report found some 20,000 "fund-seeking" agencies existed in the United States.¹⁵ Faced with greater competition for donors, organizations such as the National Foundation, while not forgoing traditional emotional appeals, increasingly crafted more sophisticated public relations programs emphasizing relationship building and two-way communication.¹⁶

As the National Foundation began the transition to its new mission in the late 1950s, it faced a perception problem. The public did not view arthritis and birth defects to be as dangerous as it had polio, even though all three could cripple or cause death. Many Americans knew someone personally who had been affected by polio. They had seen newspaper images of polio victims wearing



Virginia Apgar, examining a newborn, was hired to oversee a multimillion-dollar research budget for the March of Dimes, but her wit, intelligence, and plain language propelled her into the role of media-savvy public spokeswoman about birth defects. Photo published with permission of Mount Holyoke College Archives and Special Collections.

leg braces or wrapped in cocoon-like iron lungs. Swimming pools sported signs that read "Closed Polio" during summer epidemics, and children came home from school with the *Polio Pointers* leaflet that warned "Don't mix with new groups" and "Don't get chilled."¹⁷ However, many considered arthritis a normal part of aging. And families didn't talk about their children with birth defects, a topic clouded by parental guilt and lack of knowledge. Even O'Connor acknowledged that with birth defects his organization was "aiming at a hidden target."¹⁸

There was much that scientists and the public had yet to learn about the cause of birth defects. It was only in 1959 that French researcher Jérôme Lejeune noticed that the cells of individuals with Down syndrome had 47, instead of the usual 46, chromosomes.¹⁹ The thalidomide scare would make U.S. headlines in 1962.²⁰ Still to come were the 1964 and 1965 epidemics of rubella, commonly known as German measles, that caused 30,000 fetal deaths and 20,000 babies to be born with birth defects; a vaccine would not be available until 1969.²¹ The vaccine RhoGam to prevent Rh Disease, a blood disease of the newborn due to Rh factor incompatibility, would be licensed in 1968.²² If the public was in the dark about birth defects, it was in large part because physicians were just beginning to embrace their study. In the 1960s, two subspecialties were still in their infancy: perinatology, the care of pregnant women and fetuses at high risk of complications, and teratology, the care of individuals with congenital malformations.²³

In effect, birth defects represented a vast set of health concerns the National Foundation was unlikely to ever defeat. For Apgar, the organization's timing was ideal: She had just, on her fiftieth birthday, received a master's degree in public health from Johns Hopkins University. When Thomas Rivers, a noted virologist who directed research programs at the National Foundation, approached her about heading up its new division of congenital malformations, she said yes.

Apgar was used to challenges. As a woman physician finding her way in the male-dominated medical culture of the first half of the twentieth century, she overcame gender bias and professional setbacks.²⁴ Friends said nothing seemed to stop the purposeful Apgar—not tollbooths along the New Jersey turnpike as she roared past them en route to a baby's birth or the old-fashioned surgeon who offered only discouraging words about a woman's ability to succeed in a surgical career. Reticent to adopt the feminist cause as her own, Apgar said on more than one occasion, "I don't think women ever had it hard, except you do have to be twice as good as a man to get to the same place, but that is something every woman knows."²⁵ The task of encouraging the medical community to pursue birth defects research would be easy for the accomplished Apgar. However, she would be surprised by the demands on her time that radio and the new medium of television placed on their favorite birth defects personality.

Apgar was born June 7, 1909, in Westfield, New Jersey, to Helen May Clarke and Charles Emory Apgar. Her mother was a homemaker and her father a salesman and amateur scientist-inventor whose basement workshop crackled with the sounds of radio receivers, including one he used during World War II to intercept coded messages about German submarine maneuvers. "He could do anything," Apgar wrote.²⁶ The young girl adored her father and likely kept him company in his shop as he tinkered with a telescope or invented special buttons, instead of keys, to unlock their house doors. She found her mother's kitchen less interesting, as her "C" grades in cooking in elementary school confirmed.²⁷ Years later, she would claim that her only culinary skill was boiling a lobster.²⁸ She didn't develop strong ties with her mother, she wrote, because she "clicked like a lock" with her Aunt May, a third-grade teacher who lived with the family.²⁹

Her father, who wrote scientific articles on Jupiter's moons, also penned a magazine article in 1906 espousing suburban life that showed the family's stately two-story home and large lawn.³⁰ The neighborhood, a block from Westfield's "Little Italy," was ethnically diverse, but its population of child-age playmates was ten boys and no girls. Ginny, as friends and family called her, remembered her birthday gifts being baseball gloves and bats, not dolls.³¹ From an early age she learned to compete with the boys.

Theirs was also a musical family. Ginny began violin lessons at age six and throughout her life would not only play but learn to craft her own instruments. Her brother, Lawrence, would become a music professor at Earlham College in Indiana. Education started early at the Apgar home. Charles sent away in the mail for Montessori method teaching materials, and the house became strewn with sandpaper letters, shoelaces, and graded blocks as he enthusiastically taught Ginny to read when she was three.³² Ginny later wrote of his influence: "Thank Goodness, I have inherited his optimism, or else I could never work in the field of birth defects."³³

In high school, Apgar competed on tennis, track, and basketball teams. She debated on the school team, taught herself Greek, and, not surprisingly, played in the orchestra. Math and chemistry were favorite subjects, and she often cited her mathematics high school teacher Marielle R. Kays as an important mentor.³⁴ Friends in her 1925 graduating class wondered in the yearbook pages, "Frankly, how does she do it?"³⁵

Apgar entered Mount Holyoke College in Massachusetts with great enthusiasm and little money. Scholarships, loans from friends, and college jobs—from opening the library each morning to catching stray cats for the anatomy lab—funded her

four years at the private women's college. The aspiring physician was a zoology major who reported for the college newspaper, participated on seven varsity athletic teams, and played violin in the orchestra. She was up by 6 a.m. most mornings, a habit that continued throughout her life, scribbling in her diary or writing letters home. She signed a September 1925 letter to her mother "Jimmy—that's what they're calling me" and admitted her surprise at having a roommate.³⁶

When Apgar entered Columbia University College of Physicians and Surgeons in 1929, she was one of just four women in her medical school class. In 1933, she graduated fourth in her class.³⁷ She also was \$4,000 in debt in the midst of the Great Depression. For the next two years, she had an internship in surgery, but decided not to pursue a career as a surgeon largely for financial reasons.³⁸ Columbia's head of surgery, Allen Whipple, counseled her that she would have difficulty making a living since surgical patients would be reluctant to have a female operate on them.³⁹ His advice reflected the lack of women, and career opportunities for them, in medicine at the time. Women represented just 5 percent of American doctors in 1920, and the proportion did not rise above 7 percent until 1970.⁴⁰ Apgar settled on the developing specialty of anesthesia, which male physicians at the time found unattractive because of its low pay and prestige.⁴¹ She became particularly interested in anesthesia's use in obstetrics. More American women were turning to hospitals for childbirth amid a cultural shift in which the natural process of labor and birth came to be viewed as a painful one that doctors could relieve with assorted medications.⁴² It was a time of experimentation: chloroform, ether, ethylene, cyclopropane, and nitrous oxide, all had their proponents. Thus, Apgar in 1935 entered a field in which methods depended largely on physician preference, and nurses were more skilled at administering anesthesia than the doctors.⁴³ That suited the entrepreneurial Apgar just fine.

Seeking further education in anesthesiology, Apgar convinced Ralph Waters of the University of Wisconsin Medical School in Madison to give her a temporary position in his residency program.⁴⁴ The reluctant Waters—considered the founder of academic anesthesiology—was not thrilled with female students, however competent.⁴⁵ Apgar arrived mid-school year in January 1937, bags in hand but no place to live. With available resident housing already filled, she camped in Waters's office the first week. A January 11, 1937, diary entry notes: "Found a room, free!"⁴⁶ For the young doctor, a "grand day" meant having nine gynecological cases in just under four hours⁴⁷ and bad days were when a "B.P. cuff exploded with loud retort" or "Patient almost died."⁴⁸

In 1938, Apgar returned to Columbia University College of Physicians and Surgeons and began a two-decade career there. She rose from assistant to full professor of anesthesiology in 1949—the first woman to hold a full professorship at Columbia—and clinical director of the division of anesthesiology, then part of the surgery department. It was a busy time for a woman new at managing others. She directed dozens of residents and attending physicians and, at times, sixty-five operations a day. She herself administered anesthesia for more than 20,000 operations. And, the job's biggest plus, babies: Apgar would deliver more than 17,000 in her career.⁴⁹ "The yowling of a healthy baby is the best possible music to my ears," she said in a 1965 interview.⁵⁰

At Columbia, her unorthodox teaching style surprised the young doctors under her tutelage. She encouraged students to feel her own coccyx, or tailbone, to better comprehend the anatomical space important to epidural injections. She was known to sneak a

critical anesthesia agent or equipment item out of the operating room and leave the resident empty-handed, testing the individual's self-reliance. One young resident carried a can of ether in his pocket, just in case.⁵¹ Her good friend L. Stanley James said at her memorial service, "She was one person the medical students will always remember."⁵² Mixing an educational message with humor, outrageousness, and compassion were techniques that would serve her well in her next career at the National Foundation.

The job at Columbia had its downside, however, and Apgar's memos to higher-ups indicate she struggled to get the financial resources and staff the division needed.⁵³ In 1949, hospital officials decided to raise anesthesia from division to department status and hired Emanuel Papper to chair the new department. Whether Apgar felt slighted at being passed up for the job is not known. Now free from administrative tasks, she increased her research activities. In 1953, she published a seminal paper that introduced an effective assessment of newborns' health, which came to be called the Apgar score. It measures an infant's pulse, skin color, reflex, muscle tone, and respiration in the first minute of life.⁵⁴ As Atul Gawande recently wrote, "The Apgar score changed everything. It was practical and easy to calculate, and it gave clinicians at the bedside immediate information on how they were doing."⁵⁵ Significant for directing the physician's attention to the infant needing resuscitation, the Apgar score is still used in hospital delivery rooms around the world.

In 1958, she requested a yearlong sabbatical to pursue a master's of public health degree at Johns Hopkins in Baltimore. Forty-nine-years old when she began classes, she studied cell biology and computer sciences "with boys who wear barrettes in their hair and hoops in one ear but are bright as buttons."⁵⁶ Statistics proved her nemesis, as a September 25, 1958, diary entry punctuated with a sad smile noted: "Statistics all AM. Decimals all wrong again."⁵⁷

By the time the National Foundation made its offer, Apgar had published other notable work, including the first academic paper that showed anesthetic agents crossed the placenta and affected newborns.⁵⁸ While the National Foundation could have selected a number of research scientists to lead its expanded program, few would have matched Apgar's hours in the delivery room and firsthand experience with children suffering birth defects.

Apgar was on her new job in June 1959. Her changing titles over the next fifteen years showed her advancement: director of basic research in 1967, vice president for medical affairs in 1968, and in 1973, the year before her death, senior vice president for medical affairs.⁵⁹ Apgar's division fell under the supervision of Thomas Rivers, whom author Richard Carter described as having "a round, ruddy face, a voice like the protest of the bull moose, an accent redolent of hominy grits and hawg jowl, and an outlook mellowed by patience."⁶⁰

At the organization's top was the dynamic Basil O'Connor. FDR recruited him to lead the National Foundation in 1938, and in 1944, to chair the American Red Cross. A 1945 photo shows O'Connor and George Patton standing by the lieutenant general's three-star Jeep in northern France.⁶¹ Journalists noted O'Connor's impeccable wardrobe, his Waldorf-Astoria suite, and his law partnership and friendship with FDR.⁶² Rich and smart, he used his considerable connections to build the National Foundation into

the nation's largest voluntary health organization, with trustees that at one time included major corporation executives as well as David Sarnoff, W. Averell Harriman, and George Gallup.⁶³

So it happened that a woman who felt at home in a white lab coat, and who enjoyed the simple pastimes of gardening and stamp collecting, found herself in the company of men who counted presidents among their good friends and who traveled by private jet.

The organization also was not averse to celebrity razzle-dazzle: In a 1958 photo, Marilyn Monroe holds the hands of two poster children, as models behind them strut Christian Dior and other high-couture gowns at the annual March of Dimes Fashion Show, on stages designed by Salvador Dali.⁶⁴

"In a 1958 photo, Marilyn Monroe holds the hands of two poster children, as models behind them strut Christian Dior and other high-couture gowns."

The National Foundation, entering its third decade in 1958, had a professional public relations staff that used a variety of media strategies to get the organization's message out. Dorothy Ducas, a former newspaper reporter and magazine editor who was hired in 1937 as director of women's publicity, ran the department like a news service. She knew that recruiting volunteers and establishing an organization's legitimacy required

year-round effort, as she explained in a 1984 interview: "And I sold everybody, Mr. O'Connor particularly, on the idea that you can't just come to the public with your hand out all the time unless you tell them what you did with the money that you got last time round."⁶⁵ Ducas left the National Foundation in 1959, the same year that Apgar arrived, to work as an advisor to U.S. Surgeon General Luther Terry. Though the two women did not have the chance to work together, Ducas established the foundation for Apgar's media success: She had cemented the organization's credibility among magazine and newspaper journalists, and she had nurtured an internal atmosphere in which the medical and public relations staffs communicated. The latter had not always been so. Early medical research directors, including Apgar's boss Thomas Rivers, distrusted "anybody who had anything to do with newspapers," Ducas said.⁶⁶ However, Ducas saw to it that she and staff science writers Dave Preston and Roland Berg, later a medical editor at *Look*, could attend scientific sessions.

Silos still existed. An internal memo noted that medical staff typically prepared material targeted to other medical professionals so that it would be more influential and written in the proper vernacular. The memo did not indicate what, if any, role physicians should play in writing publications aimed at a lay public.⁶⁷ Scholars have noted that the scientific community in much of the twentieth century did not view the popularization of science as a high-prestige endeavor.⁶⁸

Apgar, however, did not show antipathy toward the press, a characteristic that sets "visible scientists" apart from their peers, according to author Goodell.⁶⁹ Nor had she shown any desire to claim the spotlight. She was comfortable behind the lecture podium at professional conferences but at her best one on one. She was calm, professional, and maternal. Compared with the organization's Hollywood campaign hosts, she was the type of individual you could jot a question to about your son's malformed arm and she would answer. Her effectiveness as a communicator would come as much from her female voice—a friend talking to a friend—as her medical stature. Mothers in need of answers responded to her guiding persona, much as women in kitchens across the United States tuned in to hear Betty Crocker, a made-up personality, on radio and television. And for journalists cynical of the celebrity pseudoevent, Apgar was refreshingly sincere. National

Foundation records do not indicate when staff members realized Apgar was an ideal spokesperson for birth defects. But they did.

Public relations staff began to place Apgar on radio broadcasts with regularity in the early 1960s. In 1964, she was booked on WNYC's *You and Your Health*, WOR's *Vincent Tracy* and *Arlene Francis* shows, and WNBC's *Speak Up, with Edith Walton*.⁷⁰ Often, staff scheduled shows to promote the March of Dimes, the organization's major fund-raising event each January. Other programs encouraged listener calls, and questions typically focused on current worries such as the German measles epidemic in 1964. The July 14, 1966, syndicated radio program *Medicine '66* claimed a reach of one thousand stations in the states, U.S. armed forces radio, and Radio Europe.⁷¹ On one October day in 1967 alone, she taped three radio shows and one television program in Washington, D.C., suggesting media in the nation's capital had noticed Apgar was a good draw.

Some programs were live, such as WNBC New York's *Luncheon with Mimi*. Hosted by former Metropolitan opera soprano Mimi Benzell, the radio talk show was broadcast from Shephard's restaurant in the New York City's Drake Hotel. NBC producer Michael Klepper asked Apgar to fill out a somewhat silly questionnaire beforehand on which she noted her favorite gripes as cigars and spitting, and "too many hobbies" to list. Next to marital status, she scribbled "no husband" with a smiley face.⁷²

Apgar squeezed media interviews around her job as director of birth defects research. The avid personal diarist also kept a professional log of work-related activities. She filled hundreds of pages with typed notes documenting meetings with physicians and grant hopefuls who pitched research projects from metabolic pathways related to the formation of cleft palate to the causes of congenitally dislocated hips. In 1961 alone, she traveled to Yugoslavia, Israel, Lebanon, and Rome. In between she hoppedscotched across the states, chartering a plane when her flight was delayed to Walla Walla, Washington, or she might have missed her speech. As it was, she had ten minutes to spare. One day she found time to go fishing.⁷³ A 1962 newspaper article reported that while in Ketchikan, Alaska, she spent the morning examining babies suspected of having birth defects.⁷⁴ She often estimated she traveled about 100,000 miles each year.

Throughout her career, she answered dozens of requests for reprints of the Apgar scoring system and related publications. When Colorado pediatrician L. Joseph Butterfield wrote her about the A.P.G.A.R. epigram (he later admitted the correct term was acronym) that he had created to help medical students remember her scoring system, Apgar replied with evident delight: "I chortled aloud when I saw the epigram."⁷⁵ Staff in the National Foundation's radio/television and motion picture department promoted the score and its creator with *Apgar on Apgar*, a film produced with a grant from Gerber Baby Foods in 1966 that got widespread coverage in medical journals as well.⁷⁶

Apgar's appearances on television shows picked up in 1966. However, not all shows pleased the physician. Apgar's handwritten note on the bottom of a thank-you letter that WJZ-TV in Baltimore sent her after a 1966 call-in show read: "Never T.V. again for a 'phone' show—Radio OK."⁷⁷ Was she flustered in front of the camera juggling a barrage of questions? Whatever her

objection, she overcame it to appear on television often. Perhaps she understood that she had become the face of the organization even though her salary still came from directing research programs. She was a regular guest on the *Bob Kennedy and Company* show on ABC-TV in Chicago. After a 1970 evening broadcast, show staff wrote Apgar that "the phones had been ringing since 8:20 this morning asking for literature and commenting on 'what a great lady you are.'"⁷⁸ She appeared on WABC-TV's *Girl Talk* program in New York several times, and when work took her to Cleveland, on the *Fred Griffith Show*.⁷⁹

Apgar evolved into the savvy physician-publicist who could turn a generic conversation about birth defects to the National Foundation's work preventing them. Interviewed in the twenty-three-minute educational film *A Question of Birth Defects*, produced by the National Foundation for rental and loan during the 1960s, she was in charge. Wearing a flowered dress and single strand of pearls, Apgar leaned toward the host and said: "Polio. Of course, this disease has all but disappeared due to the work of the March of Dimes." Responding to a question about the role diabetes plays in birth defects, she brought up fund raising:

"Wearing a flowered dress and single strand of pearls, Apgar leaned toward the host and said: 'Polio. Of course, this disease has all but disappeared due to the work of the March of Dimes.'"

"Here is an area that needs more research. We at the Foundation are doing research all year long, even though our funds are collected in just one month." And she had a parting quip ready for parents worried about birth defects: "Pick your parents. I'd pick the two I had."⁸⁰

Her March 21, 1973, appearance on the syndicated *Donahue Show* prompted numerous letters from viewers who could not get through the station's jammed switchboard. A mother wrote about her low-birth-weight son who lived only twenty-one hours, asking Apgar if her dental X-rays or a cold could have played a part in his death. Apgar assured her that premature deaths sometimes happen despite the best care, adding that Patrick Kennedy was born prematurely and died of a similar condition to her son's.⁸¹ There were letters from mothers with questions about toxemia, Turner syndrome, eating raw hamburger meat when pregnant, and worrisome dimples at the base of their child's spine.⁸² While Apgar answered most letters with tenderness, she could also be frank, as one mother learned: "I trust, before you have another baby, that you will improve the chances for a normal birth by losing at least 100 pounds."⁸³

Newspaper stories featuring Apgar or her National Foundation work were strikingly similar: "A compassionate, white-haired woman doctor with an infectious grin"⁸⁴ and "Dr. Virginia Apgar is a happy, hearty, loving woman who may have had as much to do with saving babies in the last few years as any other human alive."⁸⁵ Reporters described her as statuesque and motherly, impish and elf-like: "If there is one [Mrs. Santa Claus], she looks like Dr. Apgar. Dressed in a green dress with small pearls, small earrings, and snow white hair, she joked, laughed, played with her audience and ran through a speech at breakneck speed . . . all while drumming home how serious the March of Dimes effort is."⁸⁶ Apgar probably found that comparison ridiculous. She once singled out Violette Dewey's interview for the *Milwaukee Journal* article as a particularly sound one, perhaps because it focused on her favorite vocations of medicine and music.⁸⁷ Print journalists clearly adored interviewing the "unabashed devotee of babies."⁸⁸

Magazine media also published National Foundation articles

written by Apgar. Her 1963 series of articles in *American Baby* magazine resulted in 350,000 requests for reprints, and the magazine's grateful editorial director used her editor's letter in the January 1964 issue to promote the National Foundation's upcoming fund-raising drive.⁸⁹ The same month, an article by Apgar appeared in *Family Circle*.⁹⁰ Not surprisingly, *Baby Post* magazine wanted the celebrity author, too, but staff had to decline due to Apgar's busy schedule.⁹¹

At the time, a female scientist writing for the popular press was unusual. Between 1910 and 1955, only 3 percent of the stories in a sample of popular magazines had bylines by women scientists or were biographies of women in science, and the proportion dropped further after World War II.⁹² Apgar's visibility in the national media was a precursor to that of male physician C. Everett Koop, the U.S. surgeon general from 1982 to 1989 who shared health messages directly to the public via speaking tours and television.⁹³ However, it would be 1990 before Antonia Novello became the nation's first female surgeon general. Followed in 1993 by the outspoken Joycelyn Elders, the two women publicly championed women's health issues.⁹⁴

In the late 1960s, National Foundation staff urged Apgar to write a book to help educate the lay public about birth defects. Undoubtedly, public relations staff knew that its publication would garner national media attention as well. The busy Apgar teamed up with *Chicago Tribune* syndicated columnist Joan Beck, who previously had written about birth defects, to write the 1972 book *Is My Baby All Right?* The co-author's daughter, Melinda Beck, said in a phone interview that both Apgar and her mother were accomplished women who found "delight in everything around them."⁹⁵ She also recalled that Apgar arrived on a rickshaw at the Montreal Expo '67 pavilion where she was to meet her mother. During the five-year project, Apgar would become a family friend, "like a funny, boisterous great aunt."⁹⁶

The book enhanced the National Foundation's public relations efforts through its extensive national press coverage. The *Chicago Tribune* printed five articles based on book excerpts.⁹⁷ Apgar and Beck plugged the book at every opportunity. One journalist called it a "frank and complete revelation of everything you've wanted to know about birth defects, but were afraid to ask;" he had interviewed Apgar over lunch where he found her "as frisky as a kitten with catnip, and forthright—even racy—in speech."⁹⁸

Apgar's increasingly important role as a National Foundation spokesperson was apparent with her testimony before a June 30, 1969, U. S. Senate subcommittee hearing on prevention of communicable diseases. By then the foundation's vice president for medical affairs, she urged senators to appropriate funds for rubella vaccinations and to consider including Rh disease prevention in future measures. In her statement, she also promoted the 107 Birth Defects Centers that the National Foundation supported.⁹⁹

Hereditary factors cause many birth defects, and Apgar had become intrigued by the developing field of genetics. In a 1973 newspaper interview, she discussed the potential value of genetic counseling for young couples. The idea was new. Only recently had the practice of amniocentesis, a prenatal test for genetic defects, gained credibility with physicians.¹⁰⁰ Senators Walter F. Mondale and Edward M. Kennedy were organizing committees to review the ethical questions such counseling raised. Apgar questioned if doctors were not the ones to do genetic counseling, then who should: "The sociologists, the ministers, the engineers?"¹⁰¹

In 1973, Apgar took a leave of absence from the National Foundation to study genetics at Johns Hopkins. She slipped away

from the books long enough to attend the televised gala at the Kennedy Center where *Ladies Home Journal* awarded her a 1973 Woman of the Year in Science award. On stage with host actress Kathryn Crosby, Bing Crosby's wife, she looked uncomfortable but still managed a joke.¹⁰² She later wrote a friend that she would have much preferred to be out walking in the March of Dimes Walkathon: "This month is a horrid one for me. I dread it. The rah, rah, rah, TV, photos interviews, etc. but with your help I will survive it. It all seems so artificial . . . if all that money and time could be put, instead, into helping kids who need it, it would be so much better."¹⁰³

She planned to return to the National Foundation after the year at Johns Hopkins, but her health began to fail. She wondered if a genetic counseling position might be less taxing than her current job. Unfortunately, she didn't get a chance to make that next career change. She died August 7, 1974, at age sixty-five at Columbia-Presbyterian Medical Center, where her medical career began.

During her fifteen years at the National Foundation, Apgar saw the organization's donations climb back to \$48.7 million, having fallen to lows of \$21 million in the mid-1960s.¹⁰⁴ By 1974, the term birth defects appeared widely in the popular press, keeping the issue in front of the public.¹⁰⁵ However, media attention only partly explains why donors embraced the National Foundation's new cause. Also important was Apgar's ability to mesh interpersonal and mass communication. The likeable, knowledgeable female doctor easily persuaded individuals that birth defects deserved their attention. She appeared on national television and spoke over the airwaves, but viewers and listeners responded as if she were in their homes. According to Myers, a publicist's ability to shape public opinion stems from accurate, authentic, and trustworthy communication.¹⁰⁶ Apgar embodied those public relations principles.

A September 15 memorial service at Riverside Church in New York City drew hundreds of friends and colleagues. They shared favorite stories: Apgar's threat to fly under New York's George Washington Bridge some day (she had started flying lessons at age fifty-nine); her mischievous swiping of a curly maple shelf in a hospital pay telephone booth for the back of the viola she was making,¹⁰⁷ and a purse packed with pen knife and airway tube ready for an emergency tracheotomy (she performed sixteen).¹⁰⁸ Hospital coworkers told of her carrying a young patient afraid of elevators up nine flights of stairs. National Foundation president Joseph F. Nee praised the woman who became the face of his organization and the birth defects cause:

She drew and held the attention of writers, broadcasters, talk-show hosts and their audiences like a magnet. Riveting them with a quip, she would proceed to provide more effective public-and professional-education than all the learned tracts, leaflets or films we could produce. We often complained that she talked too fast-but she got the message across.¹⁰⁹

Physician, publicist, and humanitarian, Apgar gave people permission to talk about birth defects. "Some people look upon birth defects today as they looked upon syphilis and cancer years ago," Apgar told a *Newsday* reporter in 1961, adding that for some families, birth defects remained "hidden in the closet." The news story's headline announced what she planned to do about it: "Birth Defects Need 'Airing' Says Director."¹¹⁰ And that's what she did.

NOTES

¹ David W. Rose, *March of Dimes, Images of America*, (Charleston, S.C.: Arcadia Publishing, 2003), 68-69. For official announcement at University of Michigan, see "The First Press Release on Polio Vaccine Results," <https://sph.umich.edu/polio/>. Also, *The Washington Post* April 27, 1955, front page described the first wave of vaccinations with military metaphor: "The nation yesterday unsheathed its newest weapon against the vaulted crippler polio and the first battleground was the body of a gritty 6 year old Falls Church boy."

² Rose, *March of Dimes*, 43. The organization's first radio appeal urged Americans to send dimes to the White House. Comedian Eddie Cantor suggested the appeal's name be March of Dimes as a play on the popular *March of Times* newsreel.

³ *1954 Annual Report, National Foundation for Infantile Paralysis*, 40. March of Dimes Archives, White Plains, N.Y., (hereafter MOD), Publications Collection, series 1: Annual Reports.

⁴ Georgette Baghdady and Joanne M. Maddock, "Case Study: Marching to a Different Mission," *Stanford Social Innovation Review* 6, no. 2 (Spring 2008): 64. The authors detail how the organization's methodical research and polling led it to choose arthritis and birth defects as health issues for its new mission.

⁵ *Ibid.*, 65.

⁶ *Ibid.* The NF would drop arthritis from its program in 1964, and the re-organized Arthritis Foundation became the sole organization responsible for that cause. In 1976, the NF changed its name to March of Dimes Birth Defects Foundation.

⁷ *1959 Annual Report, National Foundation for Infantile Paralysis*, 21, MOD, Publications Collection, series 1: Annual Reports.

⁸ Joan Beck, "Virginia Apgar, In Memoriam," in *Clinical Perinatology*, 2nd ed., eds. Silvio Aladjem, M.D., Audrey K. Brown, M.D., and Claude Sureau, M.D. (St. Louis: C.V. Mosby Co., 1980), xxiv, MOD, Virginia Apgar Papers (hereafter Apgar papers), series 3: Typescripts, Eulogies for Virginia Apgar Memorial Service, 1974.

⁹ L. Stanley James, "Fond Memories of Virginia Apgar," *Pediatrics* 55, no. 1 (January 1975): 2.

¹⁰ Beck, "Virginia Apgar," xxv.

¹¹ Rae Goodell, *The Visible Scientists* (Boston: Little, Brown, 1977).

¹² Selma H. Calmes, "Virginia Apgar, M.D.: At the Forefront of Obstetric Anesthesia," *American Society of Anesthesiologists Newsletter* 5, no. 10 (October 1992): 9-12. Calmes has written a number of articles about Apgar and the role of women in anesthesiology history.

¹³ See Margot Opdycke Lamme and Karen Miller Russell, "Removing the Spin: Toward a New Theory of Public Relations History," *Journalism & Communication Monographs* (2010): 281-362; Karla K. Gower, "Rediscovering Women in Public Relations," *Journalism History* 27, no. 1 (2001): 14-21; and W. Timothy Coombs and Sherry J. Holladay, "Privileging an Activist vs. a Corporate View of Public Relations History in the U.S.," *Public Relations Review* 38, no. 3 (2012): 347-53. For changing definitions of publicists, see Cayce Myers, "Publicists in U.S. Public Relations History: An Analysis of the Representation of Publicists in the American Press 1815-1918" (paper presented at the annual convention of the American Journalism Historians Association, Oklahoma City, Oct. 8-10, 2015).

¹⁴ Karen Miller Russell, "Public Relations: 1900-Present," in *The Media in America, A History*, ed. Wm. David Sloan (Northport, Ala.: Vision Press, 2008), 440-41.

¹⁵ John Lear, "The Business of Giving," *Saturday Review*, Dec. 2, 1961, 63-69.

¹⁶ For a description of National Association of Mental Health public relations activities in the 1950s, see Harry Milt, "The Skeleton Is Out of the Closet," *Public Relations Journal* 12 (August 1956): 17-18, 21. For Girl Scouts anniversary campaign techniques, see Natalie Flatow and Harriett Philmus Pitt, "World's Biggest Public Service Campaign: Fifty Golden Girl Scouting Years," *Public Relations Journal* 19 (July 1963): 26-28. For a more nuanced view of the fund-raising efforts of volunteer health organizations during this period, see Marion K. Sanders, "Mutiny of the Bountiful," *Harper's Magazine*, December 1968, 23-31.

¹⁷ Rose, *March of Dimes*, 34.

¹⁸ Baghdady and Maddock, "Marching to a Different Mission," 64.

¹⁹ "What is Down Syndrome," National Down Syndrome Society, <http://www.ndss.org/Down-Syndrome/What-Is-Down-Syndrome/>

²⁰ Howard A. Rusk, "Thalidomide Tragedy I: Surge in Congenital Defects Poses Questions on Precautions and Care," *New York Times*, Aug. 5, 1962. Thalidomide, a drug never approved for use in the United States, caused severely deformed limbs in nearly 12,000 European children whose mothers took the drug during pregnancy in the late 1950s and early 1960s.

²¹ "Rubella Vaccine Sped to Millions, U.S. Officials Hope to Avert New Nation-

wide Epidemic," *New York Times*, May 22, 1970.

²² Virginia Apgar, "Rh Disease . . . 1970" (paper presented to seventh annual Immunization Conference, Atlanta, Georgia, March 26, 1970), MOD, Medical Program Records, series 3: Birth Defects, 1959-1993, Rh Disease.

²³ L. Joseph Butterfield, interview by Russell A. Nelson, June 24, 1997, Oral History Project, Pediatric History Center of American Academy of Pediatrics, 191-92, <http://www2.aap.org/sections/perinatal/pdf/Butterfield.pdf>. Butterfield started the first perinatal society in Denver in 1961; he also led the campaign for Virginia Apgar's recognition by the U.S. Postal Service.

²⁴ See Selma H. Calmes, "A History of Women in American Anesthesiology," in *The Wondrous Story of Anesthesia*, eds. Edmond Eger, Lawrence Saidman, and Rod Westhorpe (New York: Springer, 2014); and Ellen S. More, Elizabeth Fee, and Manon Parry, *Women Physicians and the Cultures of Medicine* (Baltimore, Md.: Johns Hopkins University Press, 2009), 210.

²⁵ Jean Dietz, "Apgar Decides if Baby Is All Right," *Boston Globe*, Jan. 29, 1973. Other woman doctors also expressed not experiencing discrimination in their careers, as indicated in following article: "Woman Doctors View Career Problems as Normal," *Medical Tribune*, Sept. 5, 1964, Virginia Apgar papers (hereafter Apgar papers), Mount Holyoke College Archives and Special Collections, South Hadley, Mass. (hereafter MHC), box 32, folder 5, Bio info: 1964.

²⁶ Virginia Apgar, June 21, 1974, unnamed document, L. Stanley James papers, Virginia Apgar Material, MHC, box 2, folder 11.

²⁷ "Report Card, Westfield Elementary Schools," circa 1918-1919, Apgar papers, MHC, box 26, folder 1.

²⁸ Barbara Diamonstein, *Open Secrets: Ninety-four Women in Touch with Our Time* (New York: Viking Press, 1972), 15.

²⁹ Apgar, June 21, 1974, unnamed document, 3.

³⁰ C.E. Apgar, "A Westfield Home, The Advantages of Home Ownership in General and of Westfield Homes in Particular," *The Suburbanite* (February 1906), 15-17, Apgar papers, MHC, box 31, folder 1.

³¹ *Ibid.*

³² Sandpaper letters, a common Montessori teaching tool, are individual pieces of sandpaper in which letters of the alphabet are cut out; the templates let children trace the shape of the letters as they learn their phonetic sounds.

³³ Apgar, June 21, 1974, unnamed document.

³⁴ "1973 Women of the Year," DVD recording, MOD, Film, Video, and Photography Collection.

³⁵ "Virginia Apgar," *The Weather Vane*, 1925 Westfield High School yearbook, 11, Apgar papers, MHC, box 26, folder 1.

³⁶ Virginia Apgar to Dear Muv, September 1925, Apgar papers, MHC, box 5, folder 1.

³⁷ William C. Rappleye, M.D., to Dr. Virginia Apgar, June 7, 1933, Apgar papers, MHC, box 5, folder 1.

³⁸ Jacqueline Seaver, "Woman Doctors—In Spite of Everything," *New York Times*, March 26, 1961; Apgar tells reporter she didn't have a "prayer" of making a living in surgery, the specialty she preferred at the time.

³⁹ Bradley E. Smith, telephone interview by Ellen J. Gerl, Aug. 4, 2014. Smith, who knew Apgar informally, is past president of the Anesthesia History Association.

⁴⁰ Ellen S. More, *Restoring the Balance, Women Physicians and the Profession of Medicine, 1850-1995* (Cambridge, Mass.: Harvard University Press, 1999), 4.

⁴¹ Calmes, "Virginia Apgar, M.D.," 9.

⁴² Jacqueline H. Wolf, *Deliver Me from Pain: Anesthesia & Birth in America* (Baltimore, Md.: Johns Hopkins University Press, 2009), 85.

⁴³ Beck, "Virginia Apgar," xx.

⁴⁴ Ralph M. Waters to Dr. Virginia Apgar, Oct. 29, 1936, Apgar papers, MHC, box 5, folder 2.

⁴⁵ Calmes, "A History of Women in American Anesthesiology," 191-92. See also "Women or Doctors?" *Newsweek*, November 12, 1945, 84.

⁴⁶ Apgar, Jan. 11, 1937 diary entry, Apgar papers, MHC, box 1, folder 1.

⁴⁷ Apgar, Feb. 12, 1937 diary entry, Apgar papers, MHC, box 1, folder 1.

⁴⁸ Apgar, Jan. 16, 1937 diary entry and Feb. 8, 1937 diary entry, Apgar papers, MHC, box 1, folder 1.

⁴⁹ Beck, "Virginia Apgar," xxi.

⁵⁰ Carl Cobb, "She Saves Infants at Work, Makes Violins at Home," *Boston Globe*, Jan. 23, 1965.

⁵¹ Smith interview.

⁵² L. Stanley James, "Fond Memories of Virginia Apgar," *Pediatrics* 55, no. 1

(January 1975), 2. James's eulogy at Apgar's memorial service was reprinted in *Pediatrics*.

⁵³ Virginia Apgar to Dr. Allen O. Whipple, Sept. 25, 1939, Apgar papers, MHC, box 5, folder 4.

⁵⁴ Apgar, "A Proposal for a New Method of Evaluation of the Newborn Infant," *Current Researches in Anesthesia and Analgesia* 32 (July-August, 1953): 260-67.

⁵⁵ Atul Gawande, "The Score," *The New Yorker*, Oct. 9, 2006, 65.

⁵⁶ Dietz, "Apgar Decides if Baby Is All Right."

⁵⁷ Apgar, Sept. 25, 1958, diary entry, Apgar papers, MHC, box 1, folder 1.

⁵⁸ Virginia Apgar and E.M. Papper, "Transmission of Drugs across the Placenta," *Current Researches in Anesthesia and Analgesia* 31 (September-October 1952): 309-20. She authored more than sixty papers on anesthesiology, neonatal resuscitation, and birth defects.

⁵⁹ Rose, "Virginia Apgar (1909-1974)," 2002, MOD.

⁶⁰ Richard Carter, *The Gentle Legions* (Garden City, N.Y.: Doubleday & Company, 1961), 119.

⁶¹ "Somewhere in Northern France, 1945," photograph, in Rose, *March of Dimes*, 18.

⁶² Carter, *The Gentle Legions*, 104.

⁶³ *Ibid.*, 105.

⁶⁴ "The March of Dimes Fashion Show," photograph, in Rose, *March of Dimes*, 58.

⁶⁵ Dorothy Ducas, oral history interview by Gabriel Stickle, March 26, 1984, MOD, Oral History Records, 7. For more info on this pioneer public relations woman, see "Dorothy Ducas Herzog Dies; Reporter, Editor and Author," *New York Times*, September 26, 1987.

⁶⁶ Ducas interview, 15.

⁶⁷ "Memo," n.d., MOD, Media and Publications Records, series 5: National Foundation, Publicity, 1957-78 folder.

⁶⁸ Marcel C. LaFollette, "Eyes on the Stars: Images of Women Scientists in Popular Magazines," *Science, Technology, & Human Values* 13, no. 3/4 (Summer-Autumn 1988): 265.

⁶⁹ Goodell, *The Visible Scientists*, 121. The author points to researcher Jonas Salk as an example, noting he once told a journalist, "When a reporter approaches, I generally find myself wishing for a martini."

⁷⁰ Apgar papers, MHC, series 9: Radio/TV Appearances, box 24, folder 1, contains internal memos noting these and other radio programs: *You and Your Health*, Jan. 15, 1964; *Arlene Francis Show*, Jan. 16, 1964; *Vincent Tracy Show*, Jan. 11., 1965; and *Speak Up*, Jan. 15, 1964.

⁷¹ *Medicine '66* radio program, June 20, 1966, Apgar papers, MHC, box 24, folder 1. Bill Bertenshaw was moderator for the syndicated network Radio and TV Roundup Productions.

⁷² "Mimi Benzell Guest Biographical Questions," Apgar papers, MHC, box 24, folder 1.

⁷³ Apgar, diary entries, March 2, 1961, Sept. 5-7, 1961, April 15, 1961, and May 12, 1961, Apgar papers, MHC, box 2, folder 1.

⁷⁴ *New York Herald*, Aug. 3, 1962; and "Woman Doctor to Aid the Afflicted," *Ketchikan* (Alaska) *Daily News*, May 14, 1962.

⁷⁵ L. Joseph Butterfield to Virginia Apgar, July 27, 1961; and Virginia Apgar to Dr. L. Joseph Butterfield, August 1, 1961; Apgar papers, MHC, box 12, folder 2. The APGAR acronym reflects the five scoring categories doctors and nurses use to assess newborns: A-Appearance; P-Pulse; G-Grimace; A-Activity; and R-Respiration.

⁷⁶ "Apgar on Apgar," part of the training film series *Pediatric Basics*, 1966, DVD recording, MOD, Film, Video, and Photography Collections.

⁷⁷ Norman Ross to Dr. Apgar, July 14, 1966, Apgar papers, MHC, box 24, folder 2.

⁷⁸ Bob Kennedy & Co. staff memo to Virginia Apgar, July 16, 1970, Apgar papers, MHC, box 24, folder 9.

⁷⁹ For memos indicating these and other programs, see series 9: Radio/TV Appearances, in Apgar papers, MHC, box 24, folder 9,

⁸⁰ "A Question of Birth Defects," DVD recording, 1961, MOD, Film, Video, and Photography Collections.

⁸¹ Virginia Apgar to Mrs. Joseph Koerber, March 29, 1973, Apgar papers, MHC Archives, box 24, folder 8.

⁸² Many viewer letters and Apgar's replies are available in series 9: Radio Appearances, 1963-1974, in Apgar papers, MHC, box 24, folders 8, 9, and 10.

⁸³ Virginia Apgar to Mrs. Barbara Sparrow, May 8, 1973, Apgar papers, MHC, box 24, folder 9.

⁸⁴ Cobb, "She Saves Infants at Work, Makes Violins at Home."

⁸⁵ Barbara Yuncker, "The Riddle of Birth, Article VI: More Healthy Babies," *New York Post*, May 24, 1969.

⁸⁶ Peggy Peterman, "Mrs. Santa Claus on Medical Sleigh," *St. Petersburg* (Fla.) *Times*, Nov. 15, 1969.

⁸⁷ Violette Dewey, "Doctor Harmonizes Music, Medicine," *The Milwaukee Journal*, Dec. 12, 1961.

⁸⁸ Jourdan Houston, "Dr. Virginia Apgar—Unabashed Devotee of Babies," *Carroll County* (N.H.) *Independent*, July 25, 1974.

⁸⁹ Joyce Chase to Virginia Apgar, Oct. 28, 1963, MOD, Apgar papers, series 1: Correspondence, American Baby, 1963-1967 file.

⁹⁰ Virginia Apgar, "They're Solving the Mystery of Birth Defects," *Family Circle*, January 1964, 48-49, 88, 90.

⁹¹ "Re: Baby Post," National Foundation Memorandum To: Dr. Apgar, From: Irma Hunt, June 4, 1963, MOD, Apgar papers, series 1: Correspondence, Baby Post file.

⁹² LaFollette, "Eyes on the Stars," 264. The author analyzed a sample of articles from eleven general-content, mass circulation U.S. magazines published between 1910 and 1955. Magazines included popular titles such as *American Mercury*, *Atlantic Monthly*, and *The Saturday Evening Post*.

⁹³ Alice Park, "Dr. C. Everett Koop," *Time*, March 11, 2013.

⁹⁴ Lindsey Wahowiak, "US Surgeons General Inspire Passion for Public Health," *The Nation's Health* 44, no. 1 (January 2015): 1, 12.

⁹⁵ Melinda Beck, telephone interview by Ellen J. Gerl, Aug. 30, 2014.

⁹⁶ *Ibid.*

⁹⁷ Carol Kramer, "Apgar Spells Good News for Mother, Child," *Chicago Tribune*, Jan. 20, 1973.

⁹⁸ Edward J. Doherty, "Busy Doctor Writes New Book on Babies," *Pasadena* (Calif.) *Morning Star News*, March 7, 1973.

⁹⁹ Statement by Virginia Apgar, M.D., to Subcommittee on Health, Committee on Labor and Public Welfare, June 30, 1969, MOD, Medical Program Records, series 3: Birth Defects, box 3, Rubella (German Measles) file.

¹⁰⁰ Kristin Kelley, "Amniocentesis Prior to 1980," The Embryo Project Encyclopedia, <https://embryo.asu.edu/pages/amniocentesis-prior-1980>. Kelley wrote that 1970 research published in the *New England Journal of Medicine* about amniocentesis lent credibility to its use in prenatal care.

¹⁰¹ Russ Moss, "Virginia Apgar, Genetic Counseling Heralds a New Future," *Chicago Tribune*, June 25, 1973.

¹⁰² "Women of the Year—1973," DVD recording, MOD, Film, Video, and Photography Collections. See also Stephanie Fuller, "Honor Women of Year Tonight," *Chicago Tribune*, May 14, 1973. The hourlong CBS-TV special on May 14, 1973, honored eight women, among them Shirley Chisholm, Helen Hayes, and Katharine Graham. Awardees received Tiffany pendants.

¹⁰³ Margaret Rychwalski to Dr. James, March 2, 1975, L. Stanley James papers, MHC, box 2, folder 3. In her letter, she includes an excerpt of a May 2, 1973, letter Apgar wrote to her.

¹⁰⁴ *1974 Annual Report, National Foundation for Infantile Paralysis*, MOD, Publications Collection, series 1: Annual Reports. For a chart showing rise and fall of National Foundation donations over time, see "Money Follows Mission" in Baghdady and Maddock, "Marching to a Different Mission," 64.

¹⁰⁵ Using the search term "birth defects" in the database Newspaper Archives, the author found 8,665 newspaper articles mentioning birth defects in 1958-59 and more than double that number, 17,638 mentions, in 1973-74.

¹⁰⁶ Myers, "Publicists in U.S. Public Relations History," 22.

¹⁰⁷ Walter Sullivan, "Confessions of a Musical Shelf Robber," *New York Times*, Feb. 2, 1975.

¹⁰⁸ Christianna Smith, "In Memoriam, Dr. Virginia Apgar '29," *Mount Holyoke Alumnae Quarterly* 58, no. 3 (Fall 1974): 178-79.

¹⁰⁹ Joseph F. Nee, eulogy, memorial service for Dr. Virginia Apgar, Riverside Church, Sept. 16, 1974, MOD, Apgar papers, series 2: Publications, box 2, Eulogies for Virginia Apgar Memorial Service, 1974, file.

¹¹⁰ Penny Fox, "Birth Defects Need 'Airing' Says Director," *Newsday*, May 29, 1961.