PART 3

PACKAGING
Between Production and Promotion

The marketing of the movie began shortly after the contract between the Americans and Canadians was signed. Dallas Johnson, on the American side, and Lt. Col. C. W. Gilchrist, on the Canadian side, began to correspond regularly on how to attract media interest in the film, and on how to coordinate the publicity for the elements of the broader educational package. This packaging would come to include a booklet to accompany the film, a teaching guide (to help with its use in the classroom), a filmstrip (for situations where a movie event was not possible or desirable), and a number of different versions of the film to target different audiences. This was to be huge effort for Johnson and Gilchrist and their small teams at the NCI and the Department of National Health and Welfare, and would take up much of their time in 1949 and 1950.

As Johnson and Gilchrist began their promotional work, it soon became clear that promotion could not easily be separated from production. If they were to successfully market the movie, and the broader package of which it was a part, they wanted some say over what was in the film. The film was as much a promotion as it was a production. Thus, both Johnson and Gilchrist found themselves corresponding with the filmmakers on production issues, asking to review storyboards and scripts. At the same time, those on the production side also began to get involved in promotion, including David Ruhe, at the MFI. The boundary between promoting the film and determining what should be in it and how it should present its message was increasingly unclear.

Johnson’s and Gilchrist’s involvement in questions of production resulted in part from their common desire to get media organizations involved early on, but they also had two other reasons for taking an interest in questions of production. The first was Johnson’s desire to coordinate the booklet—to be produced by an award-winning science writer, Lester Grant—with the film, a desire that Gilchrist likely shared. The second reason concerned the vulnerable position of Johnson’s Cancer Reports Section within the NCI. She wanted to strengthen
the place of her newly created section within the agency, and this meant keeping NCI scientists on board with this project. Gilchrist may also have had similar reasons for wanting to keep Canadian scientists on board given the need to consolidate the position of information services within the recent reorganization of the Department of National Health and Welfare. But Johnson faced particular problems with the research side of the NCI. She wanted her very new section to be at the center of public outreach for the NCI, which meant that she had to have the cooperation of the research side. If such a high-profile project as this went wrong, it could damage her section’s credibility and undermine any future educational or publicity projects it might wish to develop. For all these reasons she felt compelled to stray into questions of production, correcting technical errors, passing on the comments of NCI scientists, suggesting themes, urging the NFB to coordinate the booklet and film. Promotion bled into production, and the filmmakers at the NFB found themselves “swamped” (as Ralph Foster put it) with letters from Johnson.

Beginning promotion

Promotional efforts began between April and July 1949, when Johnson and Gilchrist started to put out feelers to the press, radio, and television, sounding out their interest in the film. At first there was little response, perhaps just an occasional glimmer of curiosity from the media. Johnson and Gilchrist were probably unsurprised. The major promotional push would not happen for some time after the contracts were signed and there was not much that they could give the media in the early days. Constant’s original script was undergoing revision, the NFB’s new treatment would not be ready till May 1949, and a new script was not expected till June. Still, any interest from the media at this stage could be valuable and might help to guide the NFB as it developed its plans for the film. If Johnson and Gilchrist got any response to their inquiries before the scripts were ready, however, no records of them have survived.

All this changed when the writing of the new script was complete, and work began on the storyboards. By July 1949, David Ruhe had become convinced that there was a real possibility that *Life* magazine would do a big spread. A *Life* researcher, Geraldine Lux, had visited him and requested a copy of the storyboard. Ruhe had originally been brought in as mediator between the NCI and the NFB on the production side, and he was also supposed to be involved in distributing the movie, but the interest from *Life* magazine brought him into efforts to promote the film. It is not known whether he had a copy of the storyboard to give
to Lux, but even if he had one, he could not give it out without informing the other organizations involved in the film. He wrote to Ralph Foster at the NFB recommending that they supply the storyboard “after suitable delay,” and use it “to bend Life into becoming one of our publicity channels.”

A *Life* magazine spread would have been a real publicity coup. As Bert Hansen has shown, the magazine was one of the most widely read US periodicals, often saved and reread over months, years, and even decades. Copies could be found all over the country, strewn across people’s houses, piled up in garages, and perused while waiting for a haircut, attorney, or physician. It was a magazine that people leafed through time and time again, Hansen notes, as much for the excellence of the photographs as anything, imaginatively framed and produced on high quality special-coated paper. Before the rise of broadcast television, Hansen argues, *Life* was the United States’ most reliable supplier of visual impressions, including portrayals of the medical world, not only facilitating public awareness of medicine and medical discovery but also helping to sustain public interest in and support for medical research and researchers.

Medical stories appeared frequently in the magazine. They averaged two or more a month, depicting new kinds of medical care, recent breakthroughs, and ongoing medical research. The magazine printed numerous striking photographs of medical figures, making some into household names. It not only provided images of scientists and science but also sought to explain the science, both in the text and through the magazine’s pictures and diagrams. *Life* magazine was a vehicle by which Americans could visit specialized medical settings such as cancer clinics and operating rooms, normally off-limits to them, Hansen claims, and so helped to normalize those settings, perhaps reducing anxiety for patients and their families. Most important for *Challenge*, *Life* magazine promoted biomedical research: it presented it in imaginative and interesting ways, explained the need for research funding, celebrated the use of animal and human experiments in biomedicine, and promoted science as a glamorous activity that a young scientist might wish to pursue. No small wonder that Ruhe was enthused.

The early signs seemed to be promising. In August, Ruhe had a follow-up visit from Lux, this time accompanied by a reporter, Kenneth MacLeish (son of Archibald MacLeish, the American poet, writer, and Librarian of Congress). According to Ruhe they “gobbled up the story boards . . . and apparently intend to do the thing up as a good story of some 6–8–10 pages, in short a super-colossal spread,” and he pleaded for more information on locations, scripts, and other aspects of film production that *Life* could use in the article. For Ruhe, this seemed like a turning point. The early days of planning seemed to be coming to an end.
The film was going into production, and promotional efforts were gearing up: “We're spoiling for the real push, after the skirmishes of ideas and treatments... thank God with real people!”

Ruhe was not alone in his enthusiasm. Dallas Johnson expanded on Ruhe’s points a few days later to Gilchrist. She noted her surprise at how little persuasion *Life* magazine needed. The publication had made its mind up to do the story. “McLeish [sic] said with some glee that the only person who had some misgivings at first was Joe Thorndike, the Managing Editor, but that he had quit *Life* the week before and now they wouldn’t have to worry about him.” She also noted that *Life* magazine was thinking of devoting nine to eleven pages to the film, and that they desperately needed the script and schedule so that they could assign photographers to accompany the film crew that would shoot the live-action sequences. Gilchrist had been working behind the scenes to get *Life* interested, and Johnson seemed certain that he had much to do with the magazine’s enthusiasm. “As a promotion man, Colonel Gilchrist, you deserve a gold star!”

By October, the early hopes that *Life* magazine might do a major piece on the film had begun to fade. Instead of assigning their own photographer to the production, *Life* now indicated that it would rather depend on the NFB’s own coverage. Ralph Foster seems to have had doubts that the NFB could produce images of a quality that would work for *Life* magazine and saw the unwillingness to send a photographer as a sign that the magazine was losing interest. “I have no real confidence that the story will make Life, but we should in any case try to produce something that would be reasonable for them.” The crew was by then on location, filming the live-action sequences. It was a week later—November 3, 1949—that Foster informed Dallas Johnson that the first batch of stills from the Toronto shoot was ready.

Foster’s concerns about the quality of images produced by the NFB was likely not shared by all. Since its creation in 1941, the NFB’s Still Photography Division had become the country’s official photographer, ironically sometimes likened by its photographers to working for *Life* magazine. Like the Farm Security Administration and other agencies in the US, the NFB had used photographs and still images to serve the nation. Division photographers shot everything from official state functions to the routine events of daily life, producing some of the most dynamic photographs of the time, seen by millions of Canadians—and international audiences—in newspapers, magazines, exhibitions, and filmstrips. But despite this pedigree, the NFB struggled to produce images that appealed to *Life* magazine. It was becoming increasingly clear that Foster’s doubts had
proved prescient, and that nothing would come of the early enthusiasm. And so it turned out: *Life* did not produce a major piece on the film. The reasons for its declining interest are unknown. However, Johnson and Gilchrist would find this a common pattern. Media organizations would express interest in the film, but it would come to nothing, with no explanation.

*Life* magazine was only one of several outlets that Johnson and Gilchrist approached. By August 1949, the two information officers had stepped up their efforts to attract media interest. In that month, Johnson reported that she had talked to CBS television, which wanted to cover the preview. All they needed was a location. Ruhe and she favored New York, unless it turned out to be impossible to get “the Washington hierarchy at that distance,” by which she meant the leadership of the National Cancer Institute, the National Institutes of Health, the Public Health Service, and Federal Security Agency.

Also, in August/September, Johnson talked to Albert J. Rosenberg, the manager of the Text-Film Department at the McGraw Hill Book Company, who was keen to distribute the film. McGraw Hill had launched its first Text-Films in October 1947, and by 1950 had already distributed several NFB movies. Rosenberg saw *Challenge* as a chance to expand its text-film activities further by distributing other movies produced under the sponsorship of the US Public Health Service for school and adult audiences—general adult audiences as well as those in the medical profession. The market in text-films was beginning to expand rapidly, and other book publishers were entering a field which they had previously largely ignored.¹²

Johnson also began to talk to Robert Rendueles, WHO’s information chief, and the United Nations Film Board (founded 1947), which aimed to coordinate the film activities of the UN and specialized agencies and to stimulate the production, distribution, and use of films. In October 1949, the film board voted preliminary endorsement and sponsorship for the film. “This is the first time this had been done for a health film, and it will mean a lot in our promotion and distribution,” Johnson told Foster. But the meaning of this “provisional approval for sponsorship” is unclear.¹⁴ At its next meeting the UN Film Board dissolved itself, and its functions were brought within a technical subcommittee of the UN’s Consultative Committee on Public Information (CCPI). This group retained the name UN Film Board, but it worked under the rules of the CCPI and consisted of members of the CCPI. There is no further mention of *Challenge* in the records of this committee, and it does not seem to have gained final approval.¹⁵
The Package

With the beginning of efforts to interest the media in the film, Johnson began to work on other parts of the package to be associated with the film—a booklet on the challenge of cancer, a teacher’s guide, and the filmstrip. The booklet was to be targeted at a broad general audience, the teaching guide and the filmstrip directly at schools. Her hope was that these would be ready for the premiere of the film sometime in early 1950, when they would benefit from the publicity around the film and would help to promote the film itself. The package was important to Johnson for while each part could be marketed individually, the impact was likely to be much greater if everything was ready at the same time. Johnson also hoped that different versions of the movie would be available as part of this package—a twenty-minute theatrical version of the film, and shorter ten-minute versions of the film, all tailored to different audiences than Challenge.

Planning for the booklet began in early 1949, about the time that the NCI began to foresee a future collaboration with the Canadians on the film. Johnson recalled that it initially proved a more difficult project than the film. She tested several writers, assigning them single chapters to write, but none proved satisfactory. Then, by chance, the science writer Lester Grant came to Bethesda to talk to NCI scientists for a series of articles on cancer research commissioned by the New York Herald Tribune—a series that won the 1949 Westinghouse Science Writing award, administered by the AAAS.

Born in Taft, Kern County, California, Grant had had a long career as a journalist. He had worked as a copy boy at the Oakland Post-Enquirer, where he eventually became a sportswriter. Grant took his sports writing talents on the road, working for the Sporting News, the Washington Times-Herald, the Evening Star and, by the middle of World War II, the New York Herald Tribune. He was excused from wartime service for health reasons, and after the war won a Nieman Fellowship in journalism at Harvard for the 1947–48 academic year. Soon after he started the series for the New York Herald Tribune that gained Johnson’s attention. Grant seemed to her to be a perfect solution to the problem of the book.

In April 1949, shortly after the memorandum of agreement between the Canadian and American film sponsors had been signed, John Heller, the NCI chief, wrote to the publisher of the New York Herald Tribune asking if a version of Grant’s articles, with some additional material, could be republished to coincide with the release of the movie. Heller noted that the NCI was undertaking
a program to explain cancer research to the public, and the need for long-time, continuous research in the cancer field, as opposed to “any speed-up attempt [sic] to ‘buy a cure’ as we ‘bought the bomb.’” The institute also wanted to develop this project in such a way as to recruit promising students, both at the high school and college level, into the cancer research field. Grant’s articles, Heller explained, could be made into a book to accompany the film. The *Herald Tribune* agreed, and Johnson arranged with the paper to reprint the complete series as a book—for which Grant was to write three additional chapters.19

With Grant’s book underway, Johnson also began planning the teaching guide. She got the backing of the US Office of Education and the National Education Association, and approached the school superintendent of Prince George’s County, Maryland, near Washington DC, who provided eleven science teachers (the chair, and two members each from biology, chemistry, physics, botany, and general science), all given time off to help prepare the guide that would make it easier for schoolteachers to utilize both the movie and book. The hope was that the subject of cancer could be worked into existing courses of study, to motivate a lesson, indicate a practical application of a scientific principle, illustrate a research method, or dramatize the progress of a science. Presented in this way, the NCI hoped, cancer education could enhance regular teaching and enrich rather than overload the syllabus.20 The plan was to have the teaching guide, booklet, and filmstrip ready for the premiere in May 1950, along with different versions of the film targeted at different audiences, including theatrical audiences.

**Titles**

The commissioning of the booklet in April 1949 marked the beginning of Johnson’s efforts to coordinate the promotion of the book and the film. It continued with efforts to coordinate the title of the film and the book. She told Ralph Foster in August 1949 that she wanted to steal the title from the Lester Grant series. “The Challenge of Cancer” was an excellent movie title, she noted, that would have the added advantage of matching the title of the book, which would help promotion and simplify distribution. Grant was happy to let them use the title of the book for the film.21

A week or so after writing to Foster about the title, Johnson sought the advice of Morris Meister (1895–1975) on promotion and distribution: Meister was a recent president of the National Science Teachers Association (1946–8), the principal and founder of the Bronx High School of Science in New York City, and an influential figure in school science education.22 According to Johnson,
Meister liked the title “The Challenge of Cancer,” which he thought a very good one for school audiences. He also argued that the idea of cancer research as a challenge should be stressed throughout the film, particularly in the cell animation sequences. A pioneer of science clubs, fairs, and congresses, Meister had devoted a career to figuring out ways of stimulating youth interest in science. He was the founder of a highly selective specialized school, who lamented that the most scientifically promising students tended to languish in comprehensive high schools. He wanted programs that revealed high school students’ special aptitudes, and this meant not only challenging but also tantalizing them. “If you can illustrate for the youngsters what we know about the cell and tell them what we don’t know—leaving them with a feeling that here is a great riddle to be solved—you will be taking the approach that we have found a most successful recruiting device,” Johnson quoted Meister.23 “They must be made to feel that it is a great challenge—that they may be the ones to solve the problem.” In Meister’s view, it was crucial that the film do more than explain how the challenge to science emerged; it also had to offer up a vision of the future: “Technical people may want to leave the animation at the point where the challenge begins; that isn’t enough if you want to interest youngsters. Tell them what we know, then where we want to go.”24

Meister’s comments show how easily questions of promotion turned into questions of production. In order to promote the movie, the filmmakers had to do what its sponsors wanted, and that meant structuring the movie and its message to fit the broader effort to persuade children and young adults that cancer could be a career. Meister was particularly critical of the genetics section of the movie, which he described as awfully spotty, hinting at all kinds of complicated things without explaining what the problem was, much less what must be done to solve it.25

At first, Johnson confined herself to the issue of the title. She began writing regularly to Foster, prompting the latter to respond cautiously: “You are a tireless campaigner, Dallas. I am led to suspect from a few subtle references in your last four or five letters that you would be pleased to have THE CHALLENGE OF CANCER as the title of the film. Well, maybe we will . . . maybe we will . . . .”26 There are hints in this August 1949 letter that Foster would welcome a respite from the epistolary flood from Bethesda, but Johnson was not to be put off. “My enthusiasm springs from a knowledge of the ‘cancer public’ rather than the ‘movie-going public,’ she explained to Foster, perhaps hinting that the NFB did not understand this “public.”27 “The general public thinks of our subject-matter area as something that is awful, dreadful, and fearful. The shock value of the
word ‘challenge,’ I think, would not only produce audiences for you, but would also put them in an inquiring, receptive frame of mind.” She incorporated the new title *The Challenge of Cancer* into some of the draft publicity. The title *Challenge: Science Against Cancer* was officially adopted sometime between late December 1949 and early February 1950.

If Johnson’s efforts to ensure the movie reached “youngsters” and the “cancer public” prompted her to suggest how the movie might be modified, so too did her talks with various NCI scientists. It will be recalled that the NACC had had some reservations about the capacity of a movie to recruit people into the field, and such reservations may also have been common on the NIH’s Bethesda campus. So once Johnson received a copy of the storyboard from the NFB she began showing it around campus to drum up interest in the movie and to maintain good relations between her section and the NCI scientists. Whatever hesitations they might have had about the value of movies as a form of public education, few scientists, physicians, or administrators could resist the opportunity to tell the filmmakers how the movie could be improved. Most of their comments aimed to correct what they saw as factual errors in the storyboard. Others seem to have been motivated in part by professional rivalries (as when environmental cancer experts worried that too much attention was being given to tissue culture technique), and others suggested ways in which visual metaphors might be extended.

Johnson passed all this on to the NFB, as part of her broader effort to ensure that the package—the film, the booklet, the teaching guide and the filmstrip—helped those on the promotional side reach out to the intended audience, but also in an effort to maintain good relations with the research side of NCI. She explained to Ralph Foster, “I have a problem at the NCI that I don’t believe any of the rest of you have to face. Our scientists are not only extremely interested in this film but they feel strongly that it must reflect the so-called ‘scientific accuracy and integrity of NCI.’” She further noted that if she didn’t work closely with them on this, and they didn’t like the film, “it would be almost impossible for my [Cancer Reports] Section to work closely with the research people again.” Foster would not have been surprised that the scientists and others within the NCI would want a say in the making of the film. It will be recalled that he had commissioned the first script written by Maurice Constant in part to rope in cosponsors for the film, and to kick-start the broader NFB international coproduction program. He did not expect that the original June 1948 script would go
into production unchanged. It would be adapted to the needs and concerns of its new sponsors, and as discussed in chapter 4 the subsequent May 1949 treatments and June 1949 scripts were very different than the original Constant script, some of the changes reflecting the fact that this was no longer a simple Canadian production but an international coproduction with the Americans. Nationalistic themes that worked for the original Canadian production did not work for a production that involved another country, and internationalist themes came to trump nationalist ones. Some of these changes were probably made internally among the scriptwriters. But scientists, physicians, and administrators at the various sponsoring agencies also felt free to suggest changes, and indeed were encouraged to do so to allow the writers to ensure that their treatments and scripts addressed the concerns of the sponsors.

The backdrop to Johnson’s comments was an effort to reshape the relations between her Cancer Reports Section and the Research Branch and Research Grants Branch of the NCI. In developing Challenge she had wandered into the territory of the research side. At first, she sought to involve the research side on an ad hoc basis by creating a committee of NCI scientists to evaluate the film and provide advice. But this was to be only the first step in her broader effort to harmonize relations, and in May 1949 she produced a memorandum setting out how she envisaged the future relations of her section and the research side of NCI.32 There are hints in this document that there were problems in the relationship between the Cancer Reports Section and the research side. Despite Johnson’s efforts to involve NCI scientists in its evaluation, the cancer film had emerged as a focus of tension. Its precise cause is not documented in the files, and no one I interviewed for this book remembered it. However, there had been tensions over an earlier public education booklet written by William Hueper on environmental cancer, which had been cleared by the Cancer Control Branch of NCI but apparently not by the research side. The Cancer Reports Section had published the Hueper book.33

In her May 1949 memorandum Johnson set out her hopes for the Cancer Reports Section. In her view, it should do much more than simply report on the work of the NCI. It should provide public information on the field of cancer more generally, and this meant that it should also be the choke point through which all public communications should pass. To this end, she proposed that all press contacts by the research side of the NCI be cleared by her section (apparently something that had not happened consistently before) and that conversely her section should clear all their scientific reports with the research side. She also proposed ways in which her section could help with the production of
the Journal of National Cancer Institute (the NCI’s major scientific journal),
inquiries from the public, visitors to the NCI’s Bethesda buildings, and how the
Cancer Reports Section might be better integrated with the work and aims of
the research side of NCI. Given these broad ambitions, Johnson was particularly
concerned that the film that would become Challenge should be approved by the
research side. Her ambitions for the Cancer Reports Section would be endan-
gered if the film did not reflect the research side’s views or if the Cancer Reports
Section was perceived to be acting unilaterally.

Johnson’s efforts to bolster the position of the Cancer Reports Section—and
public information specialists more generally—within the NCI had thus led her
to trespass more and more into questions of production. In part this had come
about because the NFB agreed that scientific input was needed at the storyboard
stage of the project, and Johnson was best placed to get the NCI’s perspective
on this. But, as Johnson herself noted, it had also come about because of her
efforts to promote the role of public information specialists and in particular
her Cancer Reports Section within the NCI. However, if Johnson felt that the
status of her Cancer Reports Section was vulnerable to the whims of NCI sci-
entists, it also turned out, ironically, that she and the filmmakers were placed in
the position of adjudicating on the science. The problem was that NCI scientists
not only sought to correct the science, but also to ensure that their specialist
field of research did not lose out to others. Johnson and the filmmakers had a
difficult political task in figuring how to respond to such suggestions. A wrong
move could alienate support for the Cancer Reports Section not because the
film got the science wrong, but because it seemed to promote one field of science
over another.

Is it technical advice?

The point about the filmmakers unexpectedly and sometimes unknowingly ad-
judicating on the science has been mentioned before. In chapter 7 it was shown
that scientists were concerned that the film presented scientific practices un-
taken at one laboratory as representative of practices at all laboratories, and that
they were also concerned about the possibility of anti-vivisectionist reactions to
scenes depicting animal experimentation. In both instances scientific concerns
about accuracy blurred into concerns about science politics, both internal to
science and the politics of its broader relations with the public.

The ways in which technical advice on science could turn seamlessly into
more professional concerns is also evident in the environmental cancer sections
of the movie. Johnson had been asked to check the environmental cancer section of the storyboard, and she spoke to several scientists about this, including William Hueper (director of the NCI’s Environmental Cancer Section, 1938–64), Isaac Berenblum (biochemist, special research fellow at the National Institutes of Health, Bethesda, Maryland, 1948 to 1950) and Ummie (Booth). The identity of Ummie Booth is unclear, but it may have been Florence H. Booth, member of Johnson’s Cancer Reports Section and later an administrator in the Scientific Reports Branch, the NIH’s equivalent of Johnson’s section, headed by Judson Hardy.

Hueper and Berenblum thought the section was handled very adequately, though they suggested some changes to the character of the cancer patient, Mr. Davis. At that point in the production, Davis had a carcinoma of the lip (not the cheek we see in the final version), and Hueper and Berenblum wanted a backstory that would allow the filmmakers to explain more about the origins of the cancer. They thought Davis should be identified as a farmer, and a scene included of this “past middle-aged” man working in the hot sun. Also, they wanted the point made in the beginning about the connection between long hours of working in the sun and skin cancer. In other words, they asked for a cancer for which there was both a cure and a known cause.

A week or so later Johnson had a further talk with them. Now they suggested that in addition to being past middle age, the man with the skin cancer should be a Nordic type, and that instead of having a cancer on the lip he should have it on the back on the neck or the hand—two areas where this type of cancer developed because of long exposure to the sun. In the view of the environmental cancer scientists, the hand was probably better than the neck since it had the added advantage of being a part that could be shown in its entirety and of being a part of the body that people are used to having things happen to. Children in the audience would shudder, they claimed, if something happened to a lip, but they would not respond that way to a cancer of the hand. (An echo, perhaps, of the concern behind Constant’s June 1948 instruction that the filmmakers gauge the horribleness of the cancer they intended to use.) The hand was also suitable for the cell growth scene, the introductory animation sequence (2) where normal cells grow to complete organs, the eye, the heart, and the hand. They also proposed a modification to their suggested opening scene: the farmer working in the hot sun should have his hands exposed to the sun—perhaps in closeup showing bright sun on hands on a plow. Dallas Johnson endorsed such views, and her early drafts of publicity for the film describe the patient as a farmer with a cancer of the hand. Indeed, one version of the shooting script included
a shot of farmer’s head in the sunlight, “His face is weatherbeaten and heavily wrinkled. With the odd wart it is suggestive of a precancerous state.” The environmental scientists also had some other corrections to make. For example, the shooting script suggested that the animal used in the tissue culture sequence might be a rabbit, but Berenblum and Hueper disagreed. In their view, it was illogical to use rabbits in tissue culture, since they were used less than any other experimental animal in such a field, and they suggested a young chick or a rat. The environmental cancer scientists also worried that some of the beakers and glassware drawn by the storyboard artist were not actually used in scientists’ laboratories. Johnson indicated that this would be taken care of automatically since the film was to be photographed in laboratories.

NCI scientists were not only concerned about correcting what they saw as errors in the science. They were also keen to ensure that their fields were adequately represented in the film vis-à-vis other fields of science. Thus, in the view of the environmental scientists, the film treatment gave “a little too much emphasis” to tissue culture, while the biochemist Jesse P. Greenstein (1902–59) suggested the film was thin on the biochemistry—as Johnson noted, about all that was shown once the cell animation was out of the way was a lot of glassware with somebody making tea in a container of boiling water (sequence 9). Such suggestions were difficult for the filmmakers or for Johnson to resolve. While it was relatively easy to swap a rat for a rabbit, or one piece of glassware for another, it was much less easy to determine the balance between different fields or specialties because the scientists themselves did not necessarily agree on the balance. The filmmakers were caught between the disciplinary and professional rivalries of NCI scientists, as were Johnson’s efforts to secure recognition for her Cancer Reports Section from the research side of NCI. There would be no easy way of solving this issue, for what was “too much emphasis” to one scientist was too little emphasis to another.

Nor was it clear how the filmmakers and Johnson were to deal with the scientists’ enthusiasm for suggesting scenes or images for the filmmakers to include. The environmental scientists provided perhaps the most detailed suggestions, but they were not alone. Greenstein strongly advocated for a “factory” analogy to describe the biochemistry of the cell, which he thought was much better than “industry.” Normal cells, he claimed, had one “factory plan,” cancer cells had another, where the “central control” had “gone haywire:” “It’s as if the administrator has gone nuts. We know one thing—that the converters (the enzymes) don’t convert the same way. This screws up the works and the result is that the factory turns out the wrong stuff.” In his view, “What we have to do is to find a way to bring the administrator under control; get those
converters working properly; convert the cancer cell to a normal cell. John-
son also talked to the NCI tissue culture expert, Wilton R. Earle, about the
tissue culture sections, and he had some suggestions regarding the location and
made some technical corrections: microns were not thousands of an inch as
the filmmakers had it. He agreed with the environmental scientists that a rat
or mouse would be better than a rabbit, and had some ideas for demonstrating
tissue growth. He also added his own bizarre ending: “He [Earle] made merry
with what he termed a real ‘Hollywood’ ending, suggesting that the picture
close with an autopsy on our cancer patient. I protested that our patient wasn’t
supposed to die. ‘But you’ve got to kill him if you are going to pull out his in-
testines,’ Earle said, ‘and you’ll need several yards of intestines to spell out “The
End” as the picture closes.’

In the end the NFB filmmakers seem to have been quite selective about the
suggestions they included in the film. Earle’s fantasy ending did not make the
cut, nor did Greenstein’s metaphor of the cell as factory (replaced with “com-
plex industrial organism”), nor the analogy with foremen, and the idea of con-
verters gone wrong. Despite Johnson’s concerns, they did not do away with the
tea-making sequence. Mr. Davis’s cancer migrated from his lip not to his hand
or neck but to his cheek; and the rabbit in the tissue culture sequence became
a mouse. Other suggestions were adopted, or changed, or ignored. Mr. Davis
is not identified as a farmer; he is not shown plowing, and he is not exposed to
the sun. In addition, the sequence depicting the farmer’s head, the sunlight and
warts suggestive of precancers disappeared in the finished film—though the link
between outdoor work/living and cancer is mentioned in the scenes on environ-
mental and occupational cancer.

Such choices meant that Johnson had her work cut out keeping the scient-
ists on board with the project. She constantly informed them about what was
going on, repeatedly sought their advice, and notified them of the filmmakers’
responses and the reasons they accepted or rejected proposals. No doubt it was
not always a comfortable time for Johnson, with the tricky question of how to
deal with the balance within the film between different scientific specialties
and fields, the detailed suggestions that some NCI scientists made regarding
what should be included in the film, and so many suggestions rejected. Johnson
herself seems to have been able to calm much of the disquiet with her constant
efforts to keep NCI scientists involved and informed, and she seems to have had
a gift for cultivating support from the scientists. But there were limits to her per-
suasive powers. As mentioned above, the film itself became a source of tension
between her Cancer Reports Section and the research side of the NCI. While,
as mentioned above, the reasons for this are unclear, the continued efforts of scientists to shape the content of the film may be suggestive of disquiet, and the continued tension over the balance of attention given to some areas of science cannot have helped. In addition, Johnson’s broader efforts to create a central place for the Cancer Reports Section did not fare well: she failed in making it the choke point for all NCI public communications, and did she not gain full support for her other suggestions. The tensions over the film likely contributed to some of her frustrations.

Johnson had the important backing of David Ruhe and other members of the Medical Film Institute, and they stepped in to try to ease tensions between the filmmakers and their scientific paymasters, as occasionally did Gilchrist, explaining why certain scientific suggestions did not work cinematically, and pressing the scientists’ points to the filmmakers where necessary. Advice went back and forth between the NCI, the DNHW/NCIC, and the NFB in an iterative process, and that many scientists continue to support the project despite the rejection of so many of their ideas is a tribute to Johnson’s, Gilchrist’s, and the MFI’s skill in fielding their suggestions. But Johnson was becoming frustrated with the NCI, since her broader ambitions for the Cancer Reports Section were stymied. The scientists might have given way to her on the film, but many remained doubtful about its value, and unwilling to let Johnson or her section gain control of all public outreach. Johnson’s efforts to promote the film may have bled into questions of production, but this did not mean that she had achieved her broader goals for the Cancer Reports Section.