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Cinematic representations of medical technologies in the Spanish official newsreel, 1943–1970

Rosa M. Medina-Doménech and Alfredo Menéndez-Navarro

NO-DO, the Spanish official newsreel produced by Franco's dictatorship (1939–1975), held a 30-year monopoly over audio-visual information in Spain from 1943 to 1975. This paper reports on an analysis of the coverage of medical technologies by the Spanish Cinematic Newsreel Service, NO-DO, from 1943 to 1970. The study focuses on the changing roles played by cultural representations of medical technologies deployed in NO-DO. Our analysis shows how these representations offered a new space for the legitimization of the regime and, more importantly, played a key role in the attempts to construct and enforce a hegemonic national identity after the Spanish Civil War (1936–1939). During the period of isolationist autocracy that ended in the mid-1950s, the images of medical technologies reinforced the idea of a self-sufficient “national space” and deepened the break with the historical past. Once the international isolation of the regime was overcome in the late 1950s and the 1960s, the representation of medical technologies contributed to establishing a Spanish national identity that mirrored the outside world, the foreign space. Finally, gender representations in NO-DO are also explored.

1. Introduction

Recent historiography has paid attention to the audio-visual material generated by the Franco regime in an attempt to delve into the key elements that forged the collective imaginary of Spanish society, after the Civil War (1936–1939). The Spanish Cinematic Newsreel Service, known as NO-DO (acronym of *Noticiario y Documentales Cinematográficos*) enjoyed a monopoly over the production and screening of newsreels in Spain from 1943 to 1975. Alongside the mass communications media (press and radio) and educational system, NO-DO was one of the regime's primary mechanisms of enculturation.¹ Rodríguez Tranche and Sánchez Biosca (2001: 179–233) have argued that NO-DO, rather than being an instrument of propaganda in the traditional sense, was among the regime's principal means of generating representations—the combination of ideas and feelings that allow us to share a perception of the world (Hall, 1997)—of its imagined Spanish nation and society.

It was compulsory for all cinemas in Spain to screen NO-DO as a trailer to the main feature film. The cinema was the most popular form of entertainment in Spain in the post-war years, when there were around 4,000 cinemas in operation. Consequently, the images of NO-DO became familiar to most of the population. Although it is difficult to calculate the total size of the cinema audience, the strict film censorship established by the new regime reveals its concerns about the potential impact of this mass medium. NO-DO was under the control of the Fascist Party and was funded by the state, with a small part of its income derived from the hire of the newsreels to the cinemas. The main mission of NO-DO was to display the official activities of the regime, thereby contributing to the creation of a public representation of its actions and of the actions of Franco himself. This symbiosis between NO-DO's cinematic production and the new state that violently emerged after the Civil War makes the newsreel an essential source for understanding Spanish culture under Franco.² The analysis of NO-DO as a technology of ideological production is of particular interest given the relative absence of historiography on the symbolic and cultural dimension of politics during the Franco regime.³

We postulated that, as part of the regime's cultural apparatus, NO-DO played a critical role in providing Spanish society with new cultural meanings of science, scientists and technology. Thus, our research focused on NO-DO's coverage of health news, exploring the cultural representations conveyed by its reporting of medical technologies.⁴ We analyzed 106 news items, i.e., 1.2 percent of all items screened by NO-DO between 1943 and 1970. NO-DO's portrayal of health matters had many objectives, but the health education of the public was not one of them. Innovations as well as established medical technologies were presented, although with no relation to the Spanish health context of the time. We suggest that health-care news items offered a new space for the legitimization of the regime and played a key role in the process of constructing a national identity, to which the regime gave very high priority.⁵

First, we explore the inauguration genre, the most common treatment of health matters by NO-DO. This reporting genre helped to legitimize the regime and especially its leader, as the country's "true saviour," responsible for the economic boom and the modernization of Spain. In addition, the inauguration genre also served to display popular support for the regime. Second, we address the significance of medical technologies as objects of visualization for the production and reproduction of a Spanish national identity. Finally, we discuss the way that women were shown within the technological scenario. In all cases, we examine changes from the so-called First Francoism, an autarchic period of violent political repression and isolation in the years immediately after the Civil War, up to the late 1960s, by which time Spanish television had supplanted NO-DO as the principal source of visual information for the population.⁶

2. First space of representation: the inauguration genre

What we have called the "inauguration genre" was predominant in NO-DO.⁷ Fifty-two of the 106 news items on health matters screened between 1943 and 1970 belonged to this modality, covering events that commonly counted on the presence of Franco, or in his absence, the Government Minister or Director-General of Health. During the first decade, the inaugurations recorded by NO-DO included the opening of tuberculosis sanatoria or non-specialized centers such as rural health dispensaries, provincial and military hospitals,

and primary care clinics.⁸ In the early 1950s, NO-DO staged its representations of health care in yet more locations, including the African colony of Equatorial Guinea or new maternity clinics.⁹ The inauguration genre flourished in the second half of the 1950s and the 1960s, when NO-DO gave extensive coverage to the setting up of new hospitals and outpatient clinics mandated by the National Plan for Hospital Construction approved in the late 1940s.¹⁰ The pace of construction increased in the late 1960s, with the creation of new centers, the enlargement of existing ones, and the opening of specialist centers for obstetrics, pediatrics, and orthopedics, all covered by NO-DO.¹¹

Medical historiography has shown the legitimizing role played by disease epidemics during the first years of the Franco regime. The extreme living conditions endured by wide sectors of the population in the post-war period favored the outbreak of major epidemics, with a substantial increase in child mortality and death from infections. As Jiménez Lucena (1994) has pointed out, it was not unusual for the regime to blame the defeated republicans for the epidemics' existence, thereby exonerating itself from any responsibility for the conditions under which they flourished. Tuberculosis, one of the severest epidemic problems in the post-war period, is especially illustrative of NO-DO's role in the state's self-legitimizing use of disease. From 1943 to 1960, the eight documentary sequences on the inauguration of tuberculosis sanatoria served to glorify the regime rather than to reflect actual Spanish health provision and sanitary conditions at the time.¹² These cinematic representations worked to uphold the regime's ideals of order, strength, and cleanliness by avoiding any mention of tuberculosis as a social disease aggravated by the effects of war. Instead, they used inauguration scenes to celebrate the New State as a benefactor responsible for the solution of health problems.¹³

The inauguration genre served not only to reinforce and consolidate the regime but also, and perhaps more importantly, to deny any sign of historical continuity with the previous Republican period. Different filming strategies effected this rupture with the past. In addition to avoiding images of the patients—a point to which we will return later—the visual and spoken narrative did not refer to institutions, individuals, or health-care programs from previous times.¹⁴ In fact, policies directed at building tuberculosis sanatoria and developing maternal-child health programs within secondary rural health centers were inherited from past governments, including that of the Republican period.¹⁵

This de-contextualization of contemporary events from the wider historical setting was further supported by the production and design of the newsreels. Rodríguez Tranche and Sánchez Biosca (2001: 151–3) have pointed out that the voice-over narrative was written only after the film sequence had been produced, thereby allowing (intentionally or not) greater flexibility and control over the meanings that would be promoted by the combination of image and voice in the newsreel. The effect of this sequential mode of production was the trivialization of events. In other words, rather than providing an account of health issues and the government's response to them, or even a description of the health facilities and their uses, the newsreels offered banal descriptions of the images appearing on the screen, adding nothing to the viewer's experience but a further glorification of the regime.

It may be possible to argue that this temporal and social de-contextualization of the present may have offered an escape for a population overwhelmed by very real problems, particularly in the post-war period. In any case, it was a fundamental instrument for the Franco regime's construction of a common national identity, which was so wounded and fractured by the Civil War. De-contextualized news generated modes of atemporality and essentialism that, as Pérez Garzón (2000) has argued, were both very effective tools for constructing a Spanish national identity divorced from both the past and the wider world.

Thus, NO-DO contributed to the Francoist goal of a purified and isolated society, suppressing anything that was considered “anti-Spanish” (Richards, 1998).

A further feature of the inauguration genre was the triangular narrative of “flag–crucifix–dictator.”¹⁶ These three pillars of the regime—army, church, dictatorship—provided a further means of consolidating the Franco regime in NO-DO newsreels. The filmic militarization of inaugurations, especially frequent in the Basque Country, was produced not only through the appearance of army personnel and military parades but also by the filming itself.¹⁷ The newsreels systematically evoked military orderings of space by using forced and symmetric perspectives for shots of facades, rooms, or corridors.¹⁸ (See Figures 1, 2 and 3.) In some cases, patients and health-care staff were also filmed standing “in formation.” These militarized filmic spaces reproduced an esthetic of order against chaos, with the latter presented by the regime as characteristic of the Republican period.¹⁹ The montage of the newsreel items, repeated in almost all the inaugurations, started with long shots and low angles of buildings (for example the Provincial Hospital of Madrid, in NO-DO I-91, 1946, with statues to the right and large trees) that reinforced the monumental grandiosity of the regime. Subsequent shots offered more detailed but still panoramic views of the building’s interior, and of the inauguration ceremony. As Rodríguez Tranche and Sánchez Biosca (2001: 295–321) have explained, this montage displayed the grandiosity of the regime’s accomplishments in the framework of a fascist esthetic that extended beyond the strictly “martial model” exclusively associated with the filming of military parades.²⁰ This type of film structure declined in the mid-1950s, when the newsreels began to feature shots of health-care centers in operation, with patients and health staff carrying out their work. The inauguration of the Concepción Clinic in 1955 (NO-DO 648-B, 1955) is a good example of the transition. The initial long shot of the dictator’s arrival shows an ordered composition of the health-care staff, almost “in formation.” In the last scene, the public (authorities and health-care staff) are also distributed according to a very hierarchical pattern. However, the remaining sequences, which include visits to the center’s facilities, lack such a “militarized” ordering of objects (actors) in space.

The dictator was present at half of the 52 inaugurations covered by NO-DO between 1943 and 1970.²¹ The selection of locations for his appearance does not appear to have been random. In the aftermath of the Civil War, Franco seemed particularly active in the Basque Country, which had an especially damaged relationship with the “Spanish” national identity,



Figure 1. NO-DO 321-B, 1949. Copyright Archivo Histórico NO-DO, Filmoteca Española, Ministerio de Cultura. Reproduced with permission.



Figure 2. NO-DO 321-B, 1949. Copyright Archivo Histórico NO-DO, Filmoteca Española, Ministerio de Cultura. Reproduced with permission.

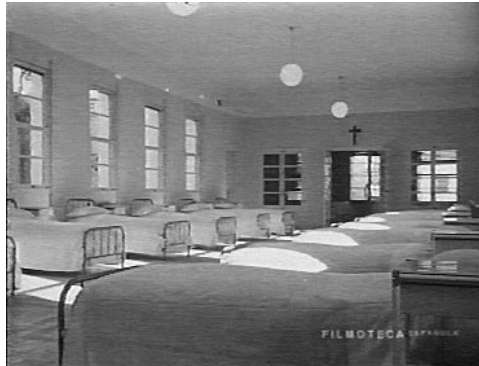


Figure 3. NO-DO 511-A, 1952. Copyright Archivo Histórico NO-DO, Filmoteca Española, Ministerio de Cultura. Reproduced with permission.

where he appeared at five inaugurations.²² In the 1960s, once the regime gained international backing, Franco was represented in the newsreel as a modern statesman in contrast to his earlier depiction as a military dictator. Madrid, the political and cultural center of the new state, became the main arena for his appearances (five out of 11).²³

The representation of popular support for the regime in the shots showing the arrival of the dictator at the centers played a key role in the process of the regime's social legitimization and in the construction of a new national identity.²⁴ It is no coincidence that the first ambient sound effects incorporated into the newsreels, in the early 1950s, were simulations of applause and cheering at the arrival and departure of the dictator.²⁵ The presence of the Head of State (or of a high-level government authority) became the axis around which the film text was structured. In this way, the film reinforced the representation of the state in the physical presence of Franco or an equivalent authority figure as the principal agent and galvanizer of the film's action and, by extension, of political action in general. This representation of a new entrepreneurial state was contradicted at certain moments, when Franco's personality eluded the firm control over his image. Fleeting shots

sometimes appeared that showed the General's inability to connect with the population and revealed his passivity and muteness, or even his unmistakable expressions of boredom.²⁶

The overarching representation of the regime as a providing, magnanimous state was constructed using both the film procedures described above and the voice-over of the narrator. Far from using the voice as an informative resource, the NO-DO narrator was a spokesman for the regime. As Rodríguez Tranche and Sánchez Biosca (2001: 89 and 125) have argued, the same anonymous off-screen voice was always used, with the same delivery, giving a strong sense of a continual presence throughout all of the films—the “voice of the One.” A symbolic sense of unity was evoked—“we are all one under the One.” The single anonymous voice enacted a form of political subjugation and worked to reconstruct the submissive national identity under discussion here. Although the effect of the voice in domesticating NO-DO documentary images has been pointed out (Rodríguez Tranche and Sánchez Biosca, 2001: 121–3), we suggest that in the inauguration genre the off-screen voice was at the service of the film narrative. The narrator habitually underlined the visual sequences with laudatory claims, for example identifying a newly opened health center as “new evidence of our State's concern for all health problems.” Moreover, the film montage, which linked inaugurations of hospitals to the openings of reservoirs, electric power stations, and schools, underlined the spectacular and grandiose nature of the works of the regime. In 1949, for example, Franco was shown at the inauguration of a Health Centre of the Railway Work Accident Insurance Service, and also at several industrial centers (NO-DO 352-A, 1949). These sections of the film were further linked with sequences of him supervising the construction of a dam and opening the *Las Conchas* power station. Another newsreel, in 1954, offered the “first visit” of Franco to the city of Logroño. In the space of just one minute and 20 seconds, the item (NO-DO 616-B, 1954) screened Franco inaugurating the Provincial Institute of Hygiene, visiting a wool factory “of great importance to the national economy,” touring a tuberculosis sanatorium, handing out symbolic ownership titles for a housing block constructed by the “Obra Sindical del Hogar,” and finally calling on the National Health Insurance General Hospital of the town.

The newsreel item on the inauguration of Madrid Provincial Hospital (NO-DO I-91, 1946) is particularly relevant with regard to the use of set formulas that nurtured an essential Spanish identity (*castizo*) to justify the regime's achievements. We shall see how the plot unfolded. A sequence on the hospital pharmacy with a shot of shelves containing rows of ceramic containers links the hospital space to the Spanish essence (*lo español*): “where the art of Spanish pottery shines with all its splendor in these classic pots.” This cliché about the quintessential nature of Spanish identity again appeared in a sequence on a bullfight held to raise funds for hospital construction: “and to this end it came about, thanks to the bullfight benefit, that the traditional splendor of the *fiesta* was renewed in 1946.”

The militaristic filmic pattern gradually changed in the 1960s. Thus, the inaugurations of hospitals and clinics showed not only patients and popular support but also a growing population gaining access to state medicine and crowding the waiting rooms. Male patients were described by the narrator as “producers,” strengthening the link between the National Insurance system and industry, both portrayed as committed to efficiency and the modernization of the country. News on medical care and rehabilitation of injured and disabled workers epitomized the regime's efforts to recover and fortify a national industrial sector.²⁷ The filmic narrative pattern also changed with science replacing religion in the leading role. Technocracy, one of the key supports of the Franco regime in the 1960s and advocated by members of the Opus Dei, was clearly represented in the newsreel. Doctors, scientists, and technicians acted as advisers to the dictator, guiding him into the world of science and technology and, metaphorically, guiding Spain towards national prosperity.

3. Second space of representation: from still artifacts to medical technologies in motion

Medical technologies offered an essential resource for representing the all-providing and magnanimous state and especially for linking the regime to ideals of modernization and efficacy symbolized through technical display. The narrator was responsible for extolling the fact that health centers were equipped with “modern technological advances” while shots of varied technologies were shown. It is worth examining these in some detail.

In the early 1940s, there were frequent shots showing basic technologies in hospital buildings: heating apparatus for patient wards, industrial kitchens among other fixtures and fittings (cupboards, examination tables, operating theater lamps), and in some cases, laboratory equipment (sterilizers, ovens and, above all, microscopes). The evident technological deficiencies of the centers did not prevent the narrator from praising them as “perfectly equipped.” At the inauguration of the Trillo Leper Sanatorium in 1943 (NO-DO 52-A, 1943), the sequence showing the very modest microbiology laboratory (just one optic microscope and one incubator) concluded with a dramatic sustained close-up of a metal container (a centrifuge) inscribed with the word “extra.” The narrator gave this otherwise meaningless object a new significance by proclaiming, as the container filled the screen, that the sanatorium was equipped with “the most advanced scientific facilities.” Thus, the editing and voice-over seemed to endow the new center with a certain technological appearance.

International support for the Franco regime in the mid-1950s, which brought the autarchic stage to an end, was reflected in the medical technologies shown on NO-DO at the time. From the mid-1950s, NO-DO’s newsreels converted medical technologies into a second means of articulating the filmic text and discourse besides the figure of the dictator. The technologies filmed covered a wide spectrum: operating theaters, X-ray apparatus, clinical laboratories, ophthalmology and dental clinics, delivery rooms, incubators and cots, and so on. All of these items were beginning to be widespread in hospitals and out-patient clinics set up under the National Health Insurance Plan for Hospital Construction mentioned above (Rodríguez Ocaña, 2001). Alongside these technologies appeared images of much more sophisticated ones, often taken from North American news broadcasts (Rodríguez Tranche and Sánchez Biosca, 2001: 117–19). This was the case with gamma cameras, the cobalt beam, and the betatron, all technologies linked to the use of nuclear energy for cancer treatment.²⁸ The original news items were part of a campaign mounted by the United States in 1953 through its “Atoms for Peace” program, to promote a positive image of atomic energy by focusing on its employment for civilian and peaceful purposes, especially emphasizing its medical uses.²⁹

As well as the types of technology shown, it is interesting to note the way they were filmed. Generally, in the first few years, the presentation of objects and centers was static. In many cases it was a matter of merely cataloging “advances” that underlined the narrator’s praise for the regime’s modernizing endeavors. For instance, in a story on the Madrid Provincial Hospital, the voice-over recited that “Since 1939, over 9 million pesetas have been invested in Madrid for the reconstruction of the Provincial Hospital . . . which is being extended and improved, making it into a modern center whose wards and corridors boast a new look” (NO-DO I-91, 1946).

It is important to note that during the first decade of NO-DO, stories on medical center inaugurations always lacked a crucial element, namely patients. Almost all the inauguration sequences offered “evacuated” images of immense empty wards. It is surprising that NO-DO chose not to show fully functioning wards with physicians at the bedside, or clinics in active operation. This approach, although it might have resulted from the haste of the

reporting and the impatience of the regime to show off its new works, led in any case to a powerful representation, which emphasized that the center was in no way inherited from the previous Republican regime but was rather a product of the new order. Thus, the absence of patients came to epitomize a rupture with the past, a memory that had also been emptied, evacuated.³⁰

As mentioned above, this treatment substantially changed in the second half of the 1950s, in which both wards and technologies were shown in action. It was not unusual to see images of surgical operations carried out in front of NO-DO cameras.³¹ Notable importance was given to the new-born. By that time, the discursive recourse to the baby as an image of the future nation was a common propaganda tool (Castañeda, 2003; Steedman, 1995). NO-DO newsreels gave generous space to images of maternity rooms at new hospitals, with sequences of babies in cots or in the arms of the health-care staff and shots of the technologies that guaranteed their survival, such as the incubator.³² The images in an extensive documentary report shown in 1947, “Penicillin in Spain” (NO-DO I-149, 1947), are especially revealing in this respect. In the second part of the report, under the title “Prevention,” children are shown receiving the care of nurses and enjoying a healthy life in the open air at a summer residence, where under the sun or ultraviolet rays, they are helped to “strengthen their health.” The underlying narrative is clear: healthy children become a metaphor for the future of Spain under the maternal care of a state in charge of preventing any “social dystocia.”³³

The greater technological facilities and the steadily increased presence of patients and health-care staff in the news were also represented in terms of a wider international context. The opening of National Health Service general hospitals, and above all the incorporation of anti-cancer technologies and lung and kidney machines in care centers at the end of the 1950s, brought about a new phase in the process of constructing a national identity. With the autarchic period now in the past, the news supported the idea of placing our health-care system in an international context, with the narrator making the novel and often-repeated claim that Spanish facilities and technologies were not only “among the best in Spain” but also as good as “the best in the world.”³⁴ This new international context must be understood as going beyond the spiritual extension that Latin America had always represented for the regime.³⁵ This strategy of defining the nation in relation to a wider international world first emerged in a 1952 documentary that showed new ambulances and health materials of the Spanish Red Cross (NO-DO 477-A, 1952). The presence of Paul Ruegger, President of the International Red Cross, lent international approval to the facilities and work of the Spanish section, and by extension, to the regime. At a later date, the holding of international congresses and courses in Spain,³⁶ the donation of national technologies to other countries,³⁷ and the export of Spanish science abroad³⁸ were shown as sanctioning the full inclusion of Spain into the Western world. In other words, after a period engrossed in the construction of a new national identity, the regime was ready to look outwards towards the external world in a new phase of this identity-building process—with unmistakable signs of historic amnesia towards exiled scientists. Santesmases (2000a) has convincingly argued that the treatment handed out in the case of Severo Ochoa (1905–1993) was unusual in this regard. When he was awarded the Nobel Prize for Medicine in October 1959, he was working in the United States and had dual nationality. The prize exceeded all the hopes of the regime, who immediately re-established official contact with him (in January 1960 he was named honorary consultant to the *Centro Superior de Investigaciones Científicas*, CSIC). Although we have found no news items devoted to his Nobel Prize in NO-DO, the Spanish press (*Abc*, *El Alcázar*, *Pueblo* or *Ya*) claimed the glory for the country and treated Ochoa as a national hero. Some professional

journals, such as *Medicina y Cirugía Auxiliar* and *Revista Clínica Española* also took this line. Such claims were not extended to the rest of the numerous and prestigious group of exiled Spanish scientists successfully working in centers abroad about whom there was a deathly silence (Giral, 1994).

4. Absent and delicate: women and medical technologies

A gender reading of NO-DO's health items is especially revealing.³⁹ In the first few years after the war, women were practically absent from view, with the exception of nuns, the occasional group of female patients celebrating Franco, and two reports showing women working in laboratories (NO-DO 35-A, 1943; NO-DO I-149, 1947).

The "evacuated scene" that characterized the early years of NO-DO, was particularly marked in relation to women. Women played an important political role in the Republican period and were the icon of the *República* itself, so that it was advisable not to display them on screen. This absence changed after the mid-1950s, when women began to appear, usually in the role of mother, patient, nurse, or technician.

We focused our analysis on NO-DO representations of women as health professionals, an aspect that has incited growing attention in the past two decades (Rossiter, 1982, 1995; Witz, 1995; Santesmases, 2000b). Certainly, there was a marked gender subordination of women in the health professions, although relatively subtle in comparison with the crude sexism of the regime. This was largely represented through coverage of the activities of the "Female Section of the Fascist Party" (*Sección Femenina de la Falange*) (Sánchez López, 1990).

In the 1940s, NO-DO included two reports produced abroad, "How the Medical Institute for the study of tropical diseases of Berlin works" (*Cómo funciona en Berlín el Instituto Médico dedicado al estudio de las enfermedades tropicales*) (NO-DO 35-A) in 1943 and "Penicillin in Spain" (*La Penicilina en España*) (NO-DO I-149) in 1947. The latter included some Spanish-produced material. Both are clear in their positioning of gender. The first documentary showed a German Army laboratory for the study of vectors of tropical diseases. The sexual division of the laboratory tasks was evident. From the first sequence, a long shot of the hall in which the women (laboratory technicians) occupied the back row, the film offered an image of women as subordinated and supplementary. The work of the female technicians is carefully filmed, representing their tasks in a way that could be characterized as "feminine," as if their tasks were those of a manicurist, showing their delicate, precise, and even maternal handling of the material. This is especially clear in a close-up of the hands of a female assistant who proceeds to tie a bow in a string in order to close an animal cage, and in another shot where the assistant cuddles a bird used as experimental animal. Before inoculating it and handing it to the official standing next to her, she raises it to her face and gives it a delicate kiss (Figure 4, NO-DO 35-A, 1943). The tasks of the women, who had no microscopes, were displayed as subordinate to the male physicians, who carried out the more "complex" work of microscopy and did the brainwork. This idea was underscored by a shot of the men in a thinking pose. The documentary devoted to the discovery and uses of penicillin abounded in the same type of segregationist treatment and in symbolic representations of feminine qualities applied to scientific work. The images highlight the women's delicate and careful handling of mice as if they were human babies. Meanwhile, the males are shown using the microscope and the X-ray machines (NO-DO I-149, 1947).

In a 1951 report on the manufacture of flu vaccines at the National Spanish School of Health (NO-DO 423-A, 1951), fading shots and lighting effects lent a certain glamour to the



Figure 4. NO-DO 35-A, 1943. Copyright Archivo Histórico NO-DO, Filmoteca Española, Ministerio de Cultura. Reproduced with permission.

scene, emphasizing the delicacy, fragility, and almost fairy-tale-like quality of the repetitive tasks permitted to women in the intimacy of the laboratory. In the images of the 1957 documentary “Eye Protection Campaign” (*Campaña de Protección Ocular*) (NO-DO I-631, 1957), both the industrial work with lathes or drills and the intellectual work in the lecture hall were undertaken by males. The importance of preventing eye disease or impairment in men was linked to productivity (“performance at work”), successful schooling, road safety, and enjoyment of life (itself portrayed through male admiration of female beauty among other “marvels of creation”). For women, shown mainly as patients in this documentary, the wearing of glasses and their selection was presented as an esthetic issue. The representation of scientific work (in ophthalmology clinics) or technical work (in the manufacture of lenses) also followed this segregationist pattern. A news item of the same year, reporting on the manufacture of vaccines against Asian flu, showed a production process at the IBYS laboratory in Madrid in which all of the staff was female (NO-DO 767-A, 1957). The documentary represented the work of women as automatic and unskilled, which in turn converted them into an undifferentiated collective mass, bereft of all historic agency. The metaphor of military threat used to describe the flu epidemic allowed the uniformed laboratory assistants to be presented as an enthusiastic legion of defenders of the Franco regime.

Gender subordination in the technological setting was sustained throughout the late 1950s and the 1960s. In the late 1960s, an increasingly dynamic Spanish population reached the screen and was represented gaining access to state medicine. Women, usually carrying children in their arms, crowded the waiting rooms and roamed through the facilities of the out-patient clinics. Thus, the overwhelming representation conveyed in these news items reinforced the woman’s role as mother and contributor to the “miracle” of the Spanish baby boom generation.⁴⁰

5. Conclusions

When this study was designed, its aim was to analyze the specific ways in which Franco’s regime popularized medical technologies within an incipient Spanish mass-culture. However, it soon became clear that public health education was not a goal of NO-DO, which rather formed part of a broader political program directed towards the reconstruction of a

single Spanish national identity. Most of the newsreels contained no clear or even comprehensible information on health or medicine and made no attempt to educate or inform the public on health issues or policy. Consequently, our research was transformed into a study of NO-DO as an historical resource produced by the regime that became a powerful discursive tool for Francoist ideology. From this perspective, medical technologies or health innovations could be understood as providing an exceptional scenario for the portrayal of Franco's political program. Film analysis provided the tools for de-codifying the close connections between the content and form of medical news. Precise contextualization of this news in its historical context explained the images of medical technologies and situated Franco's political program for Spanish nationhood within the dictatorship culture. We have tried to develop a more complex and intentional idea of the Franco regime and its power strategies. As historians, this research has taught us that historical sources can sometimes put the researcher in an extraordinarily challenging position in trying to de-codify and fully make sense of historical traces. Historical sources do not always respond to our initial expectations about their content or what we might obtain from them. In this situation, an interdisciplinary approach can be invaluable. Numerous theoretical and methodological tools from different disciplines are available to the contemporary historian. We used some of these tools in the present study to improve our understanding of NO-DO, which proved to be a complex visual source very different from the information-oriented documentary material we had initially expected to investigate.

After the Spanish Civil War, the reconstruction of a common national identity was intertwined with the need to represent Franco's regime as a paternalistic and magnanimous state. The regime built a new national identity based on a break with the past. NO-DO was not only a visual technology of political propaganda but, as we have shown in this paper, a crucial technology in the production of an essentialist and monolithic Spanish identity severely damaged and fragmented after the Civil War.

To summarize, our analysis of the changing patterns of visual representation of medical technologies in NO-DO reveals a clear link between their representations and the process of constructing a unified national identity, precluding other alternative conceptions of nation. In this paper, we have described two strategies directed towards the construction of a national identity: one concerned with the "national space" and the other built in relation to the mirror provided by the "foreign space." The form and content of NO-DO were articulated to produce both representations at different points in its history.

In the inauguration genre of health-care facilities, the state was represented as the only character in the action, both politically and visually. The prominence of the state, the erasing of the Spanish past, the *castizismo* (purism), the military visual code, and the support of the multitude for the regime, all provided the basis for the creation of a common Spanish identity.

To what semiotic subject did NO-DO address itself? Who was supposed to be the audience for the NO-DO representations? Our analysis of the NO-DO films suggests that the semiotic subject screened in NO-DO was referred to the fascist desire for a national subject modeled on men as the unified national citizen: amnesiac, vigorous, credulous, and patronized by a paternalistic state; a Spanish male with no sense of historical agency but fortified in opposition to the otherness of women, first absent from the screen and then present in a subordinate and passive role. Evidently, NO-DO played a major role in the representation of a collective militaristic and masculinized identity.

From the mid-1950s, international support for Franco's regime widened the stage. Spanish identity could now be framed in relation to the "Western world." Scientific and technological developments capitalized on the regime's "modernization" discourse for

Spain. In demonstrating modern medical technologies, NO-DO represented Spain as a leading member of the international scientific community.

Further research is warranted on the impact on Spaniards of NO-DO as a means of ideological production for the construction of a single, excluding, and undivided national identity. However, it could be argued that the Franco regime did not succeed in ridding Spain of its plurality of national identities. Thus, the Spanish Constitution (1978) established during the democratic transition recognizes the plurality of the national identity, and active debate continues to this day on the social, cultural, and political status of the different nationalities that make up Spain—all very far from the monolithic and static concept of an “Eternal Spain” (Abellán, 2005), promoted by NO-DO.

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Notes

- 1 Despite the key role of propaganda and the communications media as domination systems intrinsic to dictatorial regimes, they have not been an object of historiographic attention in Spain until recently. Sevillano Calero (1998) focuses on the daily press and the radio. The education system as a means of ideological framing has been addressed in studies such as those of Cámara Villar (1984), Ruiz Carnicer (1996), and Sáez Marín (1988). The study of Rodríguez Tranche and Sánchez Biosca (2001) is the result of a decade of research work and is undoubtedly the key contribution on NO-DO history. Another recent contribution, although of less interest, is Rodríguez Martínez (1999). NO-DO and other cinematographic products of the so-called *first Francoism* are examined in Yraola (1997).
- 2 There is sparse historiography on daily life under Franco, although the genre of personal testimony is on the rise. Titles include those of: Abella (1996), Aguilar Fernández (1996), Castilla del Pino (1997, 2004), Fontana (1998), Richards (1998), Solomon (1999), Vázquez Montalbán (1998), and Gracia and Ruiz Carnicer (2001). We are grateful to Miguel Ángel Ruiz Carnicer for his guidance on this issue.
- 3 Sevillano Calero (1999) has emphasized the relevance of these approaches and has also illustrated the still evident methodological obstacles to exploring the internalization process of dictatorial regime. Santos Juliá (2001) in his review of Rodríguez Tranche and Sánchez Biosca’s book has also underlined the challenge that this approach poses to social historians.
- 4 Notwithstanding growing consensus on the utility of audio-visual sources for the history of medicine and science, their use is still scant. The special issue of the journal *Arbor* edited by Elena (1993), the recent article by Loughlin (2000), and the conference “Picturing Health? Archival Medical Film and History,” organized by the Wellcome Institute for the History of Medicine and the Society for the Social History of Medicine (April 1996) are fine exponents of this approach. NO-DO’s scientific contents came under scrutiny in Sánchez Biosca and Rodríguez Tranche (1997). For a general overview of the role of newsreels as historical sources see Paz and Sánchez (1999). For an updated historiography review on medical technologies see Stanton (2000).
- 5 A key book for the understanding of the role played by different technologies in the construction of national identities is Anderson (1996). The construction of national identities is, of course, a matter of sustained interest in the humanities as well as the social sciences, and has been addressed in many different ways, see, for example, Reicher and Hopkins (2001), Isin and Wood (1999), and Kandiyotu (1997).
- 6 For a recent update on the historiography of this period, see the special issue of the journal *Ayer* edited by Sánchez Recio (1999). For the history of Spanish television see Baget Herms (1993).

- 7 The historic archives of NO-DO are deposited at the *Filmoteca Nacional* in Madrid. The complete production of NO-DO from 1943 until its official disappearance in 1981 consisted of 1,966 newsreels. We use the citation system commonly used in studies of NO-DO, giving the number of the newsreel, the series (A, B, or C), and the year of its screening.
- 8 Coverage of tuberculosis sanatoria opening included sanatoria in Bilbao (NO-DO 79-A, 1944), Cubet in Palma de Mallorca (NO-DO 149-B, 1945), Huesca (NO-DO 548-B, 1953) and San Sebastián (NO-DO 555-A, 1953). A rural health dispensary and primary care clinic were opened in Águilas (NO-DO 255-A, 1947) and Ferrol (NO-DO 352-A, 1949), respectively. Hospital inaugurations covered by NO-DO included the Provincial Hospital in Madrid (NO-DO I-91, 1946) and the Generalísimo Army Hospital in Guadarrama (NO-DO 321-B, 1949).
- 9 NO-DO 393-A, 1952; NO-DO 479-A, 1952; NO-DO 497-B, 1952; NO-DO 504-A, 1952.
- 10 Out-patient clinics and dispensaries belonging to the National Health Insurance System were opened in Bermeo (NO-DO 660, 1955), Eibar (NO-DO 748-A, 1957), and Madrid (NO-DO 795-B, 1958). General Hospitals (*Residencias Sanitarias*) were inaugurated in Zamora (NO-DO 634-B, 1955), Barcelona (NO-DO 667-B, 1955), Málaga (NO-DO 696-A, 1956), Burgos (NO-DO 917-B, 1960), and San Sebastián (NO-DO 920-A, 1960).
- 11 The decrees on the National Plan for Hospital Construction were issued in 1945 and 1947. They mandated the creation of 16,000 hospital beds distributed among 67 general hospitals (the so-called *residencias*), plus 62 exclusively out-patient clinics (*ambulatorios*) and a further 144 health centres (*consultorios*). According to Rodríguez Ocaña (2001) the projected number of hospital beds was reached in around 1968, although they were distributed among fewer centers than planned. The number of out-patient clinics exceeded the original projections. For a general overview of the development of the Spanish compulsory health insurance system see Alberti López (1986).
- 12 NO-DO 79-A, 1944; NO-DO 149-B, 1945; NO-DO 255-B, 1947; NO-DO 321-B, 1949; NO-DO 548-B, 1953; NO-DO 555-A, 1953; NO-DO 616-B, 1954; NO-DO 850-A, 1959.
- 13 For an examination of the campaign against tuberculosis as a priority in the health policy undertaken by the Franco regime after the Civil War, see Molero Mesa (1998, 2001).
- 14 An exception to the rule is the inauguration, in 1955, of the Concepción Clinic belonging to the Institute of Clinical and Medical Research directed by Jiménez Díaz. The Clinic—the voice-over declared—has been erected by the Government Ministry via the General Department of Devastated Regions, “to replace the Instituto Rubio de Terapéutica Operatoria previously in operation, destroyed in the times of the war” (NO-DO 648-B, 1955).
- 15 Rodríguez Ocaña (2001) analyses the elements of continuity and rupture between Republican and Francoist health administrations. For the case of the campaign against tuberculosis see the studies by Molero Mesa (1998, 2001) cited above. Continuity and fracturing elements in mother-and-child health care are explored in Bernabeu Mestre and Perdiguero Gil (2001), and Rodríguez Ocaña (1999).
- 16 Particularly illustrative is the inauguration of a rural health dispensary in Águilas (NO-DO 255-A, 1947).
- 17 NO-DO 79-A, 1944; NO-DO 321-B, 1949; NO-DO 504-A, 1952.
- 18 NO-DO 79-A, 1944; NO-DO 511-A, 1952; NO-DO 555-A, 1953.
- 19 This filmic militarization is also evident in the selected images from NO-DO included in the videocassette *NO-DO, el Tiempo y la Memoria* (Cátedra/Filmoteca Española, 2001) that accompanies the book under the same title.
- 20 Bernardo Bertolucci’s *Il conformista* (1969), adapted from a novel by A. Moravia, is a masterful example of the use of this type of militarized shot to reproduce the Italian fascist background.
- 21 For a general analysis of the presence of Franco in NO-DO see Ellwood (1987).
- 22 NO-DO 79-A, 1944 (Bilbao); 504-A, 1952 (Tolosa); 555-A, 1953 (San Sebastián); 660-A, 1955 (Bermeo); 920-A, 1960 (San Sebastián).
- 23 NO-DO 1125-A, 1964; NO-DO 1125-C, 1964; NO-DO 1177-B, 1965; NO-DO 1333-A, 1968; NO-DO 1387-B, 1969.
- 24 NO-DO 79-A, 1944; NO-DO 255-A, 1947; NO-DO 504-A, 1952; NO-DO 511-A, 1952; NO-DO 555-A, 1953; NO-DO 616-B, 1954; NO-DO 648-B, 1955; NO-DO 660, 1955; NO-DO 696-A, 1956; NO-DO 850-A, 1959; NO-DO 917-B, 1960; NO-DO 920-A, 1960.
- 25 Inauguration of a rural health dispensary and maternity clinic in Tolosa (NO-DO 504-A) and the opening of the Clinic Hospital in Granada (NO-DO 511-A), both in 1952.
- 26 NO-DO 321-B, NO-DO 362-B, both in 1949.
- 27 NO-DO 1154-A, 1965; NO-DO 1197-C, 1965; NO-DO 1128-B, 1966; NO-DO 1251-C, 1966; NO-DO 1315-B, 1968; NO-DO 1330-A, 1969; NO-DO 1415-A, 1969.
- 28 NO-DO 698-B, 1956; NO-DO 704-A, 1956; NO-DO 734-B, 1957; NO-DO 743-A, 1957; NO-DO I-656, 1957; NO-DO 849-A, 1959.

- 29 See Hewlett and Holl (1989), and Sánchez Ron (1999: 426–8) for an overview of the program “Atoms for Peace” and its reception in Spain.
- 30 The presentation and comments by Paul Julian Smith in the forum “Cinema and History” (6th Forum for Iberian Studies, University of Oxford 18–19 May 2001) have been of great importance for our analysis of these aspects.
- 31 NO-DO 479-A, 1952; NO-DO I-631, 1957; NO-DO 803-B, 1958; NO-DO 823-A, 1958; NO-DO 885-A, 1959.
- 32 NO-DO 667-B, 1955; NO-DO 696-A, 1956; NO-DO 730-A, 1957; NO-DO I-660, 1957; NO-DO 1125-A, 1965; NO-DO 1177-B, 1965.
- 33 We are grateful to Cristina Moreiras Menor for her insightful comment.
- 34 See for instance the item on Barcelona General Hospital (NO-DO 667-B, 1955); the installation of a cobalt beam in Madrid (NO-DO 734-B, 1957); or the documentary dealing with new resources against cancer available at the Clinic Hospital, Madrid (NO-DO 743-A, 1957).
- 35 Delgado Gómez-Escalonilla (1992) provides a suggestive insight into the role played by Latin America as a reference point for cultural and foreign policies during the early Francoist regime.
- 36 As in the case of the Hispano-Portuguese Health Meeting held in 1960 (NO-DO 933-B, 1960), or the Ophthalmology International Course organized by the Instituto Barraquer of Barcelona in 1958 (NO-DO 823-A, 1958).
- 37 See for instance the item covering the donation to the University of Puerto Rico of electrophoresis equipment designed by Dr. Francisco Segovia (NO-DO 753-A, 1957).
- 38 The “Eye Protection Campaign” (NO-DO I-631, 1957) contains an image of the front cover of *El desprendimiento de la retina* (1936) by Dr. Hermenegildo Arruga (1886–1972), which was translated into French, English, and German.
- 39 A seminal work in the feminist critique of cinema as a social technology is De Lauretis (1984). Unfortunately, this text seems to have gone unnoticed by most Spanish film critics, still tied to their old analytic tools. The fecundity of the gender analysis when applied to news on health matters has been pointed out by Cartwright (1995). For an extended analysis of the representation of women in NO-DO see Menéndez Navarro and Medina Doménech (2003).
- 40 A fine example of such a representation is the news item on the inauguration of an out-patient clinic in Badalona in 1968 (NO-DO 1347-A). The final sequence showed a sustained medium close shot of a smiling mother with her son in her arms waiting to take an elevator.

References

- Abella, R. (1996) *La Vida Cotidiana bajo el Régimen de Franco*. Madrid: Temas de Hoy.
- Abellán, J.L. (2005) “La unidad de España,” *El País* 14 January, p. 19.
- Aguilar Fernández, P. (1996) *Memoria y Olvido de la Guerra Civil Española*. Madrid: Alianza Editorial.
- Alberti López, L. (1986) “La asistencia sanitaria en el conjunto de la previsión social española,” in *De la Beneficencia al Bienestar Social: Cuatro Siglos de Acción Social*, pp. 297–337. Madrid: Consejo General de Diplomados en Trabajo Social/Siglo XXI.
- Anderson, B. (1996) *Imagined Communities: Reflections on the Origins and Spread of Nationalism*. London and New York: Verso.
- Baget Herms, J.M. (1993) *Historia de la TV en España, 1956–1975*. Barcelona: Feed-Back Ediciones.
- Bernabeu Mestre, J. and Perdiguer Gil, E. (2001) “At the Service of Spain and Spanish Children: Mother-and-Child Healthcare in Spain during the first two Decades of Franco’s Regime (1939–1963),” in I. Löwy and J. Krige (eds) *Images of Disease: Science, Public Policy and Health in Post-war Europe*, pp. 167–86. Luxembourg: European Communities.
- Bertolucci, Bernardo (Director) (1969) *Il conformista* [motion picture]. Italy: Mars Film Production.
- Cámara Villar, G. (1984) *Nacional-Catolicismo y Escuela: La Socialización Política del Franquismo (1936–1951)*. Jaén, Spain: Hesperia.
- Cartwright, L. (1995) *Screening the Body: Tracing Medicine’s Visual Culture*. Minnesota: University of Minnesota Press.
- Castañeda, C. (2003) *Figurations: Child, Bodies, Worlds*. Durham, NC: Duke University Press.
- Castilla del Pino, C. (1997) *Pretérito Imperfecto*. Barcelona: Tusquets.
- Castilla del Pino, C. (2004) *Casa del olivo*. Barcelona: Tusquets.
- De Lauretis, T. (1984) *Alice Doesn’t: Feminism, Semiotics, Cinema*. London: Macmillan.
- Delgado Gómez-Escalonilla, L. (1992) *Imperio de Papel: Acción Cultural y Política Exterior durante el Primer Franquismo*. Madrid: CSIC.
- Elena, A. (ed.) (1993) “Las imágenes de la ciencia en el cine de ficción” [special issue], *Arbor* 145: 9–134.

- Ellwood, S.M. (1987) "Spanish Newsreels 1943–1973: The Image of the Franco Regime," *Historical Journal of Film, Radio and Television* 7: 225–38.
- Fontana, J. (ed.) (1998) *España bajo el Franquismo*. Barcelona: Crítica.
- Giral, F. (1994) *Ciencia española en el exilio (1939–1989)*. Barcelona: Anthropos.
- Gracia, J. and Ruiz Carnicer, M.A. (2001) *La España de Franco: Cultura y Vida Cotidiana*. Madrid: Síntesis.
- Hall, S. (1997) *Representation: Cultural Representations and Signifying Practices*. London: SAGE and The Open University.
- Hewlett, R.G. and Holl, J.M. (1989) *Atoms for Peace and War, 1953–1961*. Berkeley: University of California Press.
- Insin, E.F. and Wood, R.K. (1999) *Citizenship and Identity*. London: SAGE.
- Jiménez Lucena, I. (1994) "El tifus exantemático en la posguerra española (1939–1943): El uso de una enfermedad colectiva en la legitimación del 'Nuevo Estado,'" *Dynamis* 14: 185–98.
- Juliá, Santos (2001) "Retóricas de persuasión" [review of the book *No-Do, El Tiempo y la Memoria*], *El País.es, Babelia* 23 June. URL: <http://www.elpais.es/suplementos/babelia/20010623/b17.html> (accessed 21 May 2005).
- Kandiyotu, D. (1997) *Identity and its Discontents: Women and the Nation*. New York: Harvester Wheatsheaf.
- Loughlin, K. (2000) "Documents and Sources. The History of Health and Medicine in Contemporary Britain: Reflections on the Role of Audio-visual Sources," *Social History of Medicine* 13: 131–45.
- Menéndez Navarro, A. and Medina Doménech, R.M. (2003) "Ausencia y primor: 'Mujer', tecnologías médicas e identidad nacional en el discurso visual de NO-DO," in P. Amador Carretero and R. Ruiz Franco (eds) *X Coloquio Internacional de la AEIHM. Representación, Construcción e Interpretación de la Imagen Visual de las Mujeres*, pp. 395–403. Madrid: Instituto de Cultura y Tecnología Miguel de Unamuno.
- Molero Mesa, J. (1998) "Clase obrera, medicina y estado en la España del siglo XX: Bases sociopolíticas de las campañas antituberculosas entre 1889 y 1950," in J. Castellanos Guerrero, I. Jiménez Lucena, M.J. Ruiz Somavilla and P. Gardeta Sabater (eds) *La Medicina en el Siglo XX: Estudios Históricos sobre Medicina, Sociedad y Estado*, pp. 221–8. Málaga: SEHM.
- Molero Mesa, J. (2001) "Health and Public Policy in Spain during the Early Francoist Regime (1936–1951): the Tuberculosis Problem," in I. Löwy and J. Krige (eds) *Images of Disease: Science, Public Policy and Health in Post-war Europe*, pp. 141–61. Luxembourg: European Communities.
- Paz, M.A. and Sánchez, I. (1999) "La historia filmada: los noticiarios cinematográficos como fuente histórica. Una propuesta metodológica," *Film-Historia* 9: 17–33.
- Pérez Garzón, J.S. (2000) *La Gestión de la Memoria: la Historia de España al Servicio del Poder*. Barcelona: Crítica.
- Reicher, S. and Hopkins, N. (2001) *Self and Nation: Categorization, Contestation and Mobilization*. London: SAGE.
- Richards, M.A. (1998) *A Time of Silence: Civil War and the Culture of Repression in Franco's Spain, 1936–1945*. Cambridge: Cambridge University Press.
- Rodríguez Martínez, S. (1999) *EL NO-DO, Catecismo Social de una Época*. Madrid: Editorial Complutense.
- Rodríguez Ocaña, E. (1999) "La construcción de la salud infantil: Ciencia, medicina y educación en la transición sanitaria española," *Historia Contemporánea* 18: 19–52.
- Rodríguez Ocaña, E. (2001) "The Politics of Public Health in the State-managed Scheme of Healthcare in Spain (1940–1990)," in I. Löwy and J. Krige (eds) *Images of Disease: Science, Public Policy and Health in Post-war Europe*, pp. 187–210. Luxembourg: European Communities.
- Rodríguez Tranche, R. and Sánchez Biosca, V. (2001) *NO-DO, el Tiempo y la Memoria*. Madrid: Cátedra/Filmoteca Española.
- Rossiter, M. (1982) *Women Scientists in America: Struggles and Strategies to 1940*. Baltimore: Johns Hopkins University Press.
- Rossiter, M. (1995) *Women Scientists in America: Before Affirmative Action, 1940–1972*. Baltimore: Johns Hopkins University Press.
- Ruiz Carnicer, M.A. (1996) *El Sindicato Español Universitario (SEU), 1939–1965: La Socialización Política de la Juventud Universitaria en el Franquismo*. Madrid: Siglo XXI.
- Sáez Marín, J. (1988) *El Frente de Juventudes: Política de Juventud en la España de la Posguerra (1937–1960)*. Madrid: Siglo XXI.
- Sánchez Biosca, V. and Rodríguez Tranche, R. (1997) "Los años 50 en NO-DO: de la autarquía al desarrollismo," in A. Yraola (ed.) *Historia contemporánea de España y cine*, pp. 115–36. Madrid: Ediciones de la Universidad Autónoma de Madrid.
- Sánchez López, R. (1990) *Mujer Española, una Sombra de Destino en lo Universal: Trayectoria Histórica de la Sección Femenina de Falange (1934–1977)*. Murcia: Universidad de Murcia.

- Sánchez Recio, G. (ed.) (1999) "El primer franquismo (1936–1959)" [special issue], *Ayer* 33: 1–218.
- Sánchez Ron, J.M. (1999) *Cinco, martillo y piedra: Historia de la ciencia en España (siglos XIX y XX)*. Madrid: Taurus.
- Santesmases, M.J. (2000a) "Severo Ochoa and the Biomedical Sciences in Spain under Franco, 1959–1975," *Isis* 91: 706–34.
- Santesmases, M.J. (2000b) *Mujeres Científicas en España (1940–1970): Profesionalización y Modernización Social*. Madrid: Instituto de la Mujer.
- Sevillano Calero, F. (1998) *Propaganda y Medios de Comunicación en el Franquismo (1936–1951)*. Alicante: Publicaciones de la Universidad de Alicante.
- Sevillano Calero, F. (1999) "Cultura, propaganda y opinión en el primer franquismo," *Ayer* 33: 47–66.
- Solomon, B.P. (1999) *Los Felices Cuarenta: Una Educación Sentimental*. Barcelona: Seix Barral.
- Stanton, J. (2000) "Making Sense of Technologies in Medicine," *Social History of Medicine* 13: 37–44.
- Steedman, C. (1995) *Strange Dislocations: Childhood and the Idea of Human Interiority, 1780–1930*. London: Virago.
- Vázquez Montalbán, M. (1998) *Crónica Sentimental de España*. Barcelona: Grijalbo. (Original work published 1971.)
- Witz, A. (1995) *Professions and Patriarchy*. London: Routledge.
- Yraola, A. (ed.) (1997) *Historia Contemporánea de España y Cine*. Madrid: Ediciones de la Universidad Autónoma de Madrid.

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