
Cinema and the Collective Dimensions of Disease

¹Carlos Tabernero Holgado, ²Enrique Perdiguero-Gil

¹Centro de Historia de la Ciencia (CEHIC). Universidad Autónoma de Barcelona (Spain).

²Departamento de Salud Pública, Historia de la Ciencia y Ginecología. Facultad de Medicina. Universidad Miguel Hernández. Elche (Alicante) (Spain).

Correspondence: Carlos Tabernero Holgado. Centro de Historia de la Ciencia (CEHIC). Unidad de Historia de la Medicina. Facultad de Medicina. Universidad Autónoma de Barcelona. 08193 Bellaterra (Barcelona) (Spain).

e-mail: carlos.tabernero@uab.cat

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Summary

The purpose of this article is to approach the understanding of the role played by films in the mechanisms for the socio-cultural construction of health and disease. Our starting point is the consideration of Public health and cinema as sets of practices and discourses that are interrelated and essential for the processes of construction and functioning of contemporary societies. Based on this premise, we will analyse the different types of representation of epidemics in films, seen as diseases that go beyond the private life of the individual. This provides some explanatory keys regarding our way of understanding, experiencing and managing the collective dimensions of disease.

Keywords: Cinema, Epidemics, Public health, Collective thinking.

To get sick and to die are the only sure things in life. Disease is part of the biography of every human being. However, despite our awareness of the importance life has for each individual, the daily experience of disease hardly has any social significance. From a presentist and ethnocentric point of view, individual disease in our wealthy societies has led to an epidemiological pattern dominated by chronic and degenerative diseases. Some of these are fatal, but others are not the main cause of death. Hospitals and health centres have become just one more background feature of urban and rural landscapes, places where hundreds of tragedies, which seldom go beyond their walls or the patients' relatives and friends, take place.

Public health, as a set of political and health-related structures that are essential constituents of the societies we live in, is part of our daily lives and a key factor in the construction and management of our way of perceiving and experiencing health and disease. The

mass media is also fundamental in our societies, playing an essential role in these processes by making disease visible, which is within their function as an articulating element of the symbolic pattern on which we build our communities. Thus, as far as medical-health discourses and practices are concerned, their role is complementary to that of other institutional channels, such as hospitals and health centers, in relation with the construction of our everyday experience of these situations, both at the collective and individual levels, and our position within a given community.

In this sense, when disease goes beyond the limits of the private life of individuals and affects the community, its dimensions become much more evident. This is the case of epidemics. Society suffers as a whole and measures are taken to avoid and check, by using all the available resources, the disruption that might consequentially take place.

Leaving aside AIDS and sexually transmitted diseases, which in developed countries have been placed within the group of chronic diseases, there is currently reference to several epidemics (breast cancer, cervical cancer, lung cancer, obesity, child obesity) that are linked to more or less known risk factors. However, they are 'deferred epidemics', if this term can be applied, especially in the case of non-cancerous diseases. This type of 'epidemics' have an impact on society, since they cause significant mortality; however, they are not a cause for public scare. We have got used to living with these risks.

Even situations that do cause immediate death, such as traffic accidents or gender-based violence, which are considered epidemics by certain health analysts¹, end up becoming a normal part of daily reality. Coercive measures are enacted regarding such situations, smoking being undoubtedly the clearest example. In short, the most common course of action is to begin the traditional but ineffective educational campaigns: bottom-up, people are either always to blame, or they do not have enough information.

Other situations of morbidity and mortality do disrupt society by indiscriminately affecting people, because apparently they are not linked to any risk factors, at least 'identifiable' in relation to specific groups, and because they eventually cause significant and immediate mortality. Infectious diseases and environmental disasters are typical examples of this.

In wealthy countries, epidemics linked to infectious diseases are currently rare. However, we are always vigilant. Recent cases of avian influenza and influenza A (H1N1), even with all the involvement of the pharmaceutical industry and the discredit brought on the WHO, are good examples of the extent to which the danger of epidemics is present in collective imagination. This is, once again, a very ethnocentric point of view. Epidemics that were suffered in the past by currently rich countries are still a daily reality in developing countries, and awareness of this fact only reaches the general public (especially that of wealthy countries) when a natural disaster strikes. Following the earthquake in Haiti in 2010 and the difficult, if not impossible, reconstruction of the country, the cholera epidemic that became unleashed has become news. However, the AIDS epidemic that Haiti has been suffering for

decades already still goes by unnoticed². The insatiable voracity for news exhibited by the media causes what is structural to fall into oblivion.

However, epidemic reality does not only develop around areas that have become impoverished by world order and globalization. Epidemics, understanding their origin in relation to the prevailing scientific paradigm of the moment, are events that affect all types of societies, to a higher or lesser degree. The collective dimension of epidemics generates a special relationship with the mass media. To begin with, and as we have already mentioned regarding the case of Haiti, the media's coverage (press, news bulletins on the radio and TV) is frequently fragmented by a multiplicity of market interests, both from the structural point of view (political and economic, local and global, and, of course, medical and health-related) of the situation documented, and from a strategic point of view linked to the business of media groups. Nevertheless, the media contributes to making us aware of epidemics and to shape our perception regarding their origin, risks, implications and consequences, that is, to define our position as individuals and as a part of the communities we live in^a.

Beyond documentary images, which are becoming more and more accessible through a growing multiplicity of sources responding to a multidimensional need for immediacy, and taking into account the intertextuality that is necessarily generated in contexts that are saturated with news, particularly image-based, it becomes essential to reflect on other representations of epidemics that contribute decisively to the construction and modification of collective imagination. Fiction films are an example of this. Because of its coverage as a mass medium, and because of its creative aspect both at narrative and technical levels, cinema is a very significant way for contemporary societies to look at themselves^{5,6}. Thus, the analysis of the representations in films of disease in general, and of epidemics in particular, proves an invaluable source of information regarding our way of understanding, experiencing and managing them.

It might be time to clarify that when it comes to the analysis of the diseases portrayed in films we should not take up a position where the gold standard are the nosological entities of the present historical moment. To analyse films, especially fiction ones, attempting to see whether what takes place on the

^a. It is necessary to bear in mind the increase in the use of the Internet in recent years. Communicative practices that develop around the web allow us to question the traditional views of unidirectional flows of information *from one or a few to many*, and to consider the effective creation of information flows *from many to many*. In this sense, we build our perceptions and experiences according to new types of media participation that imply significant transformations regarding the power relationships around which our social and cultural life revolves, as it happens, among many other aspects, with the radical distinction between media interests and education. See Seale³ and Tabernero Holgado⁴.

screen is in line with science or not is a possible, sometimes necessary, approach, however, it is not of much use as the only key for analysis. Part of the basic theoretical framework of the field of medical anthropology is the distinction among three concepts⁷: *disease*, the morbid species recognized in different historical periods and that can never be considered definitive. A review of the different nosotaxies that have circulated through the history of medicine is enough to prove this statement. *Illness* is the other side of the coin, meaning discomfort, suffering and the individual's impossibility to lead a normal lifestyle. These two concepts do not always go hand in hand, meaning that there can be *disease* without *illness* and vice versa.

It is worth noting that our bodies are not dumb, but that the signals they send out can only be interpreted and understood according to the medical paradigm that prevails at each moment. More than twenty centuries of dominance of the humoral conception of body functioning did not only determine the way whole generations of doctors understood disease, but it also explains the way of understanding their bodies of those who lived in the societies that shared this conception of health and disease. Likewise, and if we leave aside the markedly ethnocentric key we are following, other traditional medicinal branches such as Ayurveda or traditional Chinese medicine contributed, and still do, to help millions of people to understand their bodies according to their conceptions.

Disease and *illness* have their correlate in what is most relevant in this article, the social dimension of disease: *sickness*, a concept that allows us to explore the effects epidemics have on society in all their depth. It is in this sense, and combining all three concepts, that the basis for the specific relationship between epidemics and the mass media, and particularly cinema, can ultimately be established. Infectious diseases, especially if they cause high degrees of morbidity and mortality, and if the symptoms are particularly conspicuous, highly appeal to fiction films due to their dramatic, meaning destructive, power and as metaphors for evil⁹: a cold evil, with no conscience, represented by organisms that are difficult to perceive (hidden), and, therefore, a priori, to fight, and that, nevertheless, share their main goal with those who are affected, this goal being survival. Thus, and beyond scientific-medical or historical accuracy (portraits of epidemics set in the future, corresponding to the science-fiction genre, are abundant and often extremely rich in details), epidemics in films allow us to explore very different aspects regarding disease and death, not only at the strictly medical and health-related levels, including their demographic, economic, political and cultural elements, but also at a physical and emotional level, in that which concerns colonization and loss of control over one's own

body and the collective panic that is generated by individual degradation and indiscriminate death.

Diseases that do not cause social alarm, often because they are already accepted, frequent and/or controllable within the context in which the films are produced, even if they still have an impact on daily social reality, are not usually the focus of the films' plot, but they are rather a narrative excuse and/or a metaphor used to place certain character(s) in relation to the plot and the rest of the characters, which is often the case with flu or colds. The portrait of the deadly capacity of these apparently unimportant illnesses, directly or indirectly through complications, is frequently a dramatic resource that is integrated in the characters' development. In certain films, however, the underlying aspect is the danger of disruption in human communities. Such is the case of *Random Harvest* (1942) by Mervin LeRoy, *The Torch* (1950) by Emilio Fernández, *I'd Climb the Highest Mountain* (1951) by Henry King, or *1918* (1985) by Ken Harrison, which either deal with the topic directly, or reproduce situations that refer to the devastating flu epidemic that took place in 1918 (Figure 1)¹⁰.

The same happens with cancer as a 'deferred epidemic', used mainly as a tragic resource to illustrate how certain characters, who are usually representative of much of the population, deal with an unfair, untimely and cruel death (*illness*) that is unavoidable and indiscriminate (*disease*). The family, social and professional background of these characters offers the appropriate context for the collective management (in the classical terms of denial, rage, negotiation, depression and acceptance) of the threat (*sickness*)¹¹⁻¹³.

'Deferred epidemics', on the other hand, are often used as an excuse to reflect on the social and individual responsibility of those affected, so that, in many cases, corresponding coercive campaigns are viewed from more or less critical points of view. This allows us to approach the problem regarding the traditional confrontation between education and leisure or entertainment, where an analysis of the complex negotiation of interests (individual, professional, economic and political) that take part in the establishment of Public Health becomes essential, both when these interests are directly related to these 'deferred epidemics', and at consumer and media practice levels (see note ^a). The filmography is abundant and varied; the more or less explicitly expressed complaint about corruption in the system (at official and/or enterprise level, and also at a social level) is frequent, while its derivation in situations where the blame is put on the victims usually remains concealed, as opposed to other representations by the mass media (campaigns themselves and mainstream information). Recent examples are *The Insider* (1999) by Michael Mann

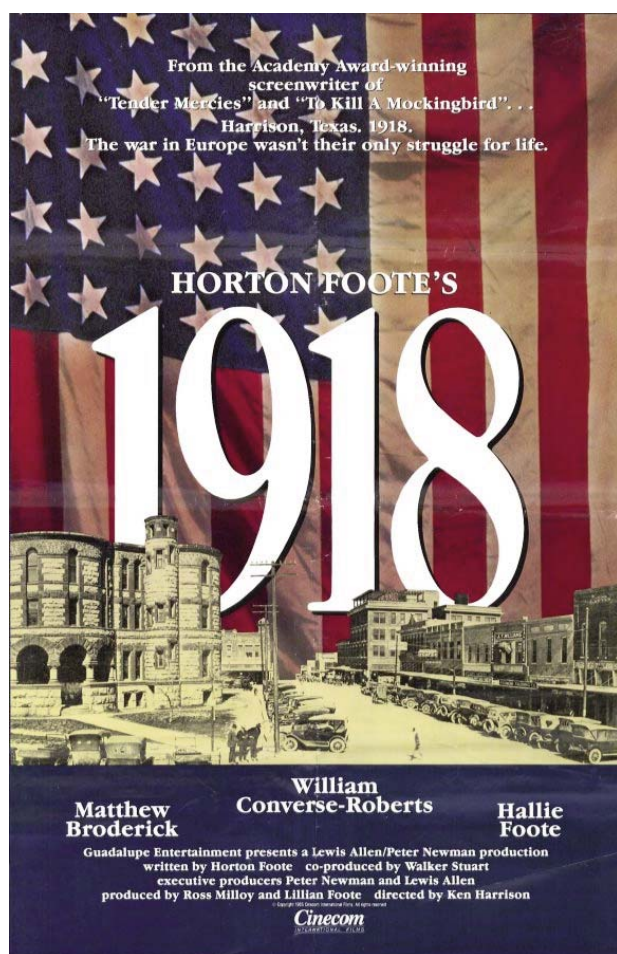


Figure 1: Film focused on the devastating flu epidemic that took place in 1918.

and *Thank you for Smoking* (2005) by Jason Reitman regarding tobacco (Figure 2); *Super Size Me* (2004) by Morgan Spurlock, *Precious* (2009) by Lee Daniels or even *Bridget Jones's diary* (2001) by Sharon Maguire, regarding obesity; *Carancho* (2010) by Pablo Trapero, regarding traffic accidents; or *Solas* (1999) by Benito Zambrano, *Sólo mía* (2001) by Javier Balaguer and *Take my Eyes / Te doy mis ojos* (2003) by Icíar Bollain, on gender-based violence^b.

As far as infectious diseases are concerned, it could be argued that the frequency and relevance of the appearance of epidemics in fiction films mainly depends on the combination of four criteria that establish the dramatic degree that might be conferred to the plot: proximity in space and/or time regarding the primary context in which the films are produced and distributed; speed and the level of morbidity and mortality, that is to say, epidemics whose outbreak is sudden and/or leads



Figure 2: Deferred epidemic: tobacco consumption.

to high levels of mortality, those that in a very short period of time compromise the foundations of a society; the degree of stigmatization (physical/bodily, social) they involve, both in the form of sequels and in the cruelty of death; and the persistence in collective imagination and therefore their effectiveness as a metaphorical resource.

The ethnocentric point of view is still relevant as far as these four criteria are concerned, since most fiction films produced around the world and the ones under analysis in this article are the product of developed countries (with the exception of India, considering it an 'emerging economy'). In this sense, proximity in space and time (frequency) of colds and flu and their complications (such as pneumonia), on the one hand, and of 'deferred epidemics', on the other hand, in wealthy countries is precisely what determines, as we have already mentioned, their acceptance as an everyday reality and, thus, their use as the main dramatic excuse to define the characters or to illustrate the contradictions that exist in the societies we live in.

^bThe analysis of gender-based discourse in films is necessarily much more comprehensive. See, for example, Jiménez Lucena (in this issue)¹⁵ and, for an introduction, Aguilar¹⁶.

When the distance in space (because currently these epidemics are mainly or exclusively reduced to poverty stricken contexts) and/or time (because the diseases dealt with have stopped being deadly or have even been eradicated in wealthy countries) increases, or when the diseases, even when affecting a significant part of the community, are more important from the point of view of morbidity than from that of mortality, the colonial representation of epidemics becomes quite frequent.

In this sense, the concept of Coloniality can be literal from a geographical and historical point of view, where the superior scientific and technical knowledge of the colonizers contrasts with the ignorance and superstition of the colonized. Westerners, being the leading characters, are examples of struggle and sacrifice in hostile environments, due to which, for dramatic reasons, they become part of the plethora of innocent victims (the native population usually becomes decimated) of the cruelty (structural, climatic) of the colonial environment, while at the same time these westerners become saviours due to their advanced health and medical practices. This is the case of cholera in *The Painted Veil* (2006) by John Curran, *Seven Women* (1966) by John Ford, *The Barbarian and the Geisha* (1958) by John Huston, *Elephant Walk* (1954) by William Dieterle (Figure 3), or *Akai tenshi* (1966) by Yasuzo Masumura, where Japan is the colonial power in China in the 30s; with yellow fever in *Grand Canary* (1934) by Irving Cummings, where the Canary Isles are the reflection of the colonial environment (in the south); or with measles, even though it is an imported disease, in *Hawaii* (1966) by George Roy Hill.

However, coloniality can also be articulated as the distinction between urban and rural environments, the latter being more exposed to the scourge of disease, both from a structural point of view, and taking into account the alleged level of ignorance and/or backwardness of its population. This is the case of diphtheria in *So well Remembered* (1974) by Edward Dmytryk, *Vigil in the Night* (1940) by George Stevens (Figure 4) or *The Country Doctor* (1936) by Henry King; or the case of typhus in *Fundoshi isha* (1960) by Hiroshi Inagaki.

In nearly all these cases, disease is used as a dramatic resource, transcendental to the plot to a higher or lesser degree, where the confrontation of the epidemic becomes a metaphor for decay and destruction and, in many cases, for the eventual individual or collective imagination (through victory over evil). The distribution of characters on both sides of the danger according to their moral values is also present. This is the case of cholera in the historical drama *The Horseman on the Roof/ Le hussard sur le toit* (1995) by Jean-Paul Rappeneau (Figure 5); with typhoid fever in *Counsel for*

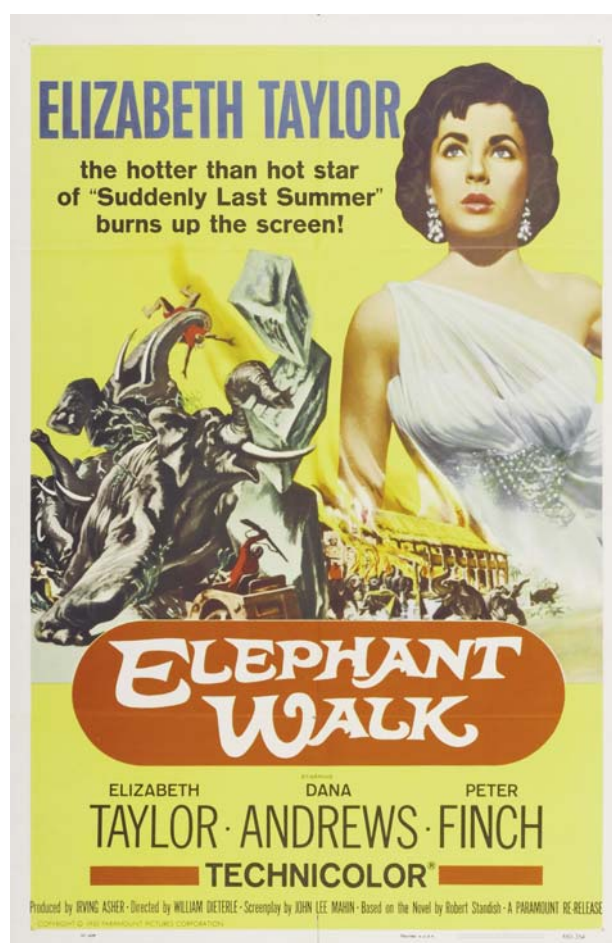


Figure 3: Coloniality in relation with cholera.

the Defense (1925) by Burton King; with diphtheria in *Mr Skeffington* (1944) by Vincent Sherman; or with blood poisoning in the claustrophobic drama *Isle of the Dead* (1945) by Mark Robson.

However, disease might also appear as a comic resource, also as a metaphor for evil as in the aforementioned examples, but at the same time as an excuse that contributes to the (more or less absurd) development of the plot at the mercy of interruptions in space and time caused by convalescence. Examples of this are chicken pox in *Home Alone 3* (1997) by Raja Gosnell (Figure 6), German measles in *Ghosts on the Loose* (1943) by William Beaudine, or measles in *Room Service* (1938) by William A. Seiter and in *How to Marry a Millionaire* (1953) by Jean Negulesco.

As we have already mentioned, their persistence in collective thinking, mainly conditioned by a high degree of stigmatization and/or a fast death rate, or by a greater proximity in space and time in wealthy countries in the 20th century, are the reason for certain diseases to become effective metaphorical resources. Examples of this are diseases as disparate as cholera, which has

already been mentioned, leprosy, smallpox, meningitis, polio and, above all, plague. These diseases are usually presented in fiction films as a complete threat for the construction and/or survival of whole human communities, that is to say, the society we live in, where the enemy might be external, usually a socio-political or ideological reflection, or internal, tending in this case to being a moral and/or cultural danger.

According to this pattern, as an example, we might mention metaphors about human passions, the power of love and the (survival to the) destruction that goes hand in hand with it¹⁷: cholera in *Death in Venice* (1971) by Luchino Visconti or *Love in the Time of Cholera* (2007) by Mike Newell, or scarlet fever in *The Reader* (2008) by Stephen Daldry; portraits of survival and courage in hostile and claustrophobic environments, such as the case of leprosy in *The Devil at 4 o'clock* (1961) by Mervyn LeRoy, *Molokai* (1959) by Luis Lucia or *Papillon* (1973) by Franklin J. Schaffner (Figure 7); or moral parables set in biblical backgrounds such as the case of leprosy again in *Ben-Hur* (1959) by William Wyler; political and



Figure 4: Coloniality related to rural settings (diphtheria).

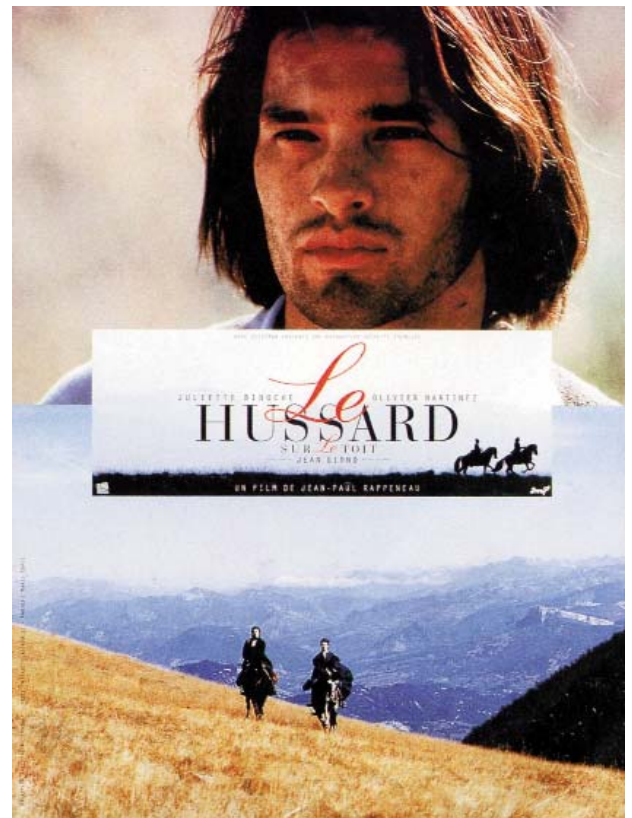


Figure 5: Cholera as a dramatic resource.

social metaphors, such as pneumonic plague linked to immigration and communism in *Panic in the Streets* (1950) by Elia Kazan, or smallpox as a reflection of a foreign and global threat in *The Killer that Stalked New York* (1950) by Earl McEvoy or *A Matter of WHO* (1961) by Don Chaffey; moral tales regarding social standing and gender-based discourse, such as the case of the plague in *Forever Amber* (1947) by Otto Preminger; historical portraits of the medieval Black Death with contemporary philosophical and existential implications, as in the case of *The Seventh Seal* (1957) by Ingmar Bergman; or heroic portraits of individuals devoted to medicine and health-related professions, who overcome all kinds of obstacles and risk their lives for the sake of the common good, supported by scientific and technical knowledge, and whose epic stories are set in the colonial world, like the example of the plague in *Arrowsmith* (1931) by John Ford, or in the rural world, such as the case of meningitis in *The Courageous Dr. Christian* (1940) by Bernard Vorhaus. Finally, polio and its proximity in space and time to the wealthy countries of the 20th century, and also meningitis, set the background for the heroic portraits of professionals of medical and health-related professions, such as *Sister Kenny* (1946) by Dudley Nichols or *A Doctor's Diary* (1937) by Charles Vidor.

Another of the great causes of mortality deserves a special mention: respiratory diseases and,

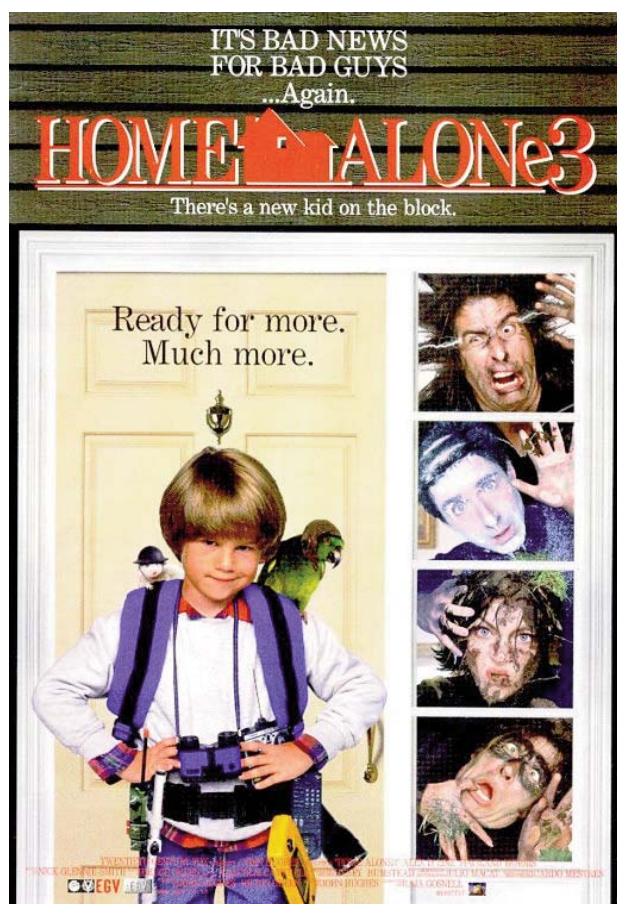


Figure 6: Chicken pox as a comical resource.

among them and above all, tuberculosis, although the plot of films about it usually focuses on the tragic development of a specific character. The double monographic issue devoted to tuberculosis by this journal in 2010 has explored the topic in depth¹⁸.

Three remarks should be made at this point. First, and without going into too much detail, we should bear in mind that during the 18th and 19th centuries and at the beginning of the 20th century European countries, each at its own pace, or even within nation states themselves, went from a demographic regime of high birth and death rates to one where both these rates fell. The decrease in mortality was mainly due to the fall in infant and teenage mortality. Within this context, films have not paid much attention to the different causes that took the lives of thousands of children. These massive infant deaths, in terms of proximity in space and time, and as regards what they mean for societies that seek a portrait of scientific-technical, medical and, in short, moral and structural superiority, as opposed to their coetaneous colonies, become a taboo issue. Not even films focused on orphanages and children's homes have put much emphasis on the scandalous death rate in such establishments. To this respect, the claustrophobia associated



Figure 7: A tale of survival under the threat of leprosy.

with these institutions is frequently transferred to the area of prison facilities, as in certain examples that have been mentioned in this article.

Secondly, regarding the epic portrait of medical and health-related practices, we must not forget that the collective dimension of disease has frequently been dealt with in biopics devoted to scientists who developed diagnostic and therapeutic procedures used in the battle against these diseases. Here we intentionally avoid the common term 'discovery' because it implies that something that already exists is 'discovered', stripping all medical procedures from their historic and social dimension. There are dozens of films that praise the work of the scientists that made contributions to Public Health. Many of them have already been studied in this journal¹⁹. The tone of these films is often intentionally hagiographic and they frequently decontextualize the work of science from its historical, economic, social and cultural background. In this sense, they are prone to proximity (from an ethnocentric point of view regarding nationality or their western origins). Thus, they rather mask instead of revealing how these contributions to the battle against disease took place.

And in the third place, again following the criterion of proximity in space and time, if the plot of many films has revolved around the retrospective focus on epidemics, the fear of contemporary or future sudden and indiscriminate death is an issue that has also been dealt with and that is still common. This is the case of AIDS, whose presence in fiction films is fairly remarkable because of its relative novelty compared with the aforementioned situations, the rapid increase in the levels of morbidity and mortality in wealthy countries before it became established as a chronic disease, the high degrees of stigmatization –especially social– associated to it, and its subsequent establishment as a metaphor for destruction (principally affecting moral standards at the individual, social, corporate and governmental levels). Regarding this, we might mention widely distributed films such as *Savage nights/ Les nuits fauves* (1992) by Cyril Collard, *And the band played on* (1993) by Roger Spottiswoode, *Philadelphia* (1993) by Jonathan Demme and *Trainspotting* (1996) by Danny Boyle; or made in more recent years and with a more comprehensive geo-cultural view *Carandiru* (2003) by Hector Babenco, or *Yesterday* (2004) by Darrell Roodt (Figure 8).

The case of Ebola (identified in 1976) is similar and has penetrated collective imagination as a reflection of unavoidable, fast and cruel death, although its ‘far away’ geographical location, in Africa, has turned it into a neocolonial metaphor for negligence and/or corruption of the system. Based on these premises are both the socio-political metaphors related to the definition of other realities (geographical, structural and political/ideological) that might threaten the foundations of our society, and the epic/heroic stories about ‘neutral or independent’ professionals who risk their careers, their social and family relationships, and even their lives, for the sake of serving the community. The clearest example of this is *Outbreak* (1995) by Wolfgang Petersen, which also plays with one of the essential and most unsettling motifs of science-fiction films: *What if...*²⁰.

In this sense, science-fiction, fantasy and horror films, being in many cases free from the restrictions imposed by reality regarding specific diseases, offer a wealth of possibilities of analysis and reflection, in the metaphorical sense, regarding our perception and experience of epidemics, both at the individual level, where our fears about physical, moral and intellectual integrity are given priority, and at the level of the socio-economic, political, ideological and cultural consequences, in relation to the explicit confrontation with the collapse of the reality we know.

Thus, we might go from mythical parables about physical and moral destruction such as the plague in relation to vampires in *Nosferatu, a Symphony of*

Horror / Nosferatu, eine Symphonie des Grauens (1921) by F.W. Murnau, and *Nosferatu the Vampyre/ Nosferatu: Phantom der Nacht* (1979) by Werner Herzog (Figure 9), going through vampire and zombie films^c, to the eeriest portraits of science fiction where the threat might come from outside like in *The Andromeda Strain* (1971) by Robert Wise, *The Invasion of the Body Snatchers* (1956) by Don Siegel, and the later versions by Philip Kaufman (1978), Abel Ferrara (1993) and Oliver Hirschbiegel (2007), or even *Alien* (1979) by Ridley Scott and its sequels, or films that focus on our own negligence in the management of our (all-powerful) scientific-technological knowledge, as in *The Omega Man* (1971) by Boris Sagal, *12 Monkeys* (1995) by Terry Gilliam, *28 Days Later* (2002) by Danny Boyle, or *Children of Men* (2006) by Alfonso Cuarón. Special reference should be made to *The War of the Worlds* (1953) by Byron Haskin, or to its remake (2005) by Steven Spielberg, to quote two well-known adaptations of H. G. Wells’ novel, published in 1898, where a bacterial infection joins forces with humans, putting an end to the unstoppable alien invasion.



Figure 8: AIDS in Africa.

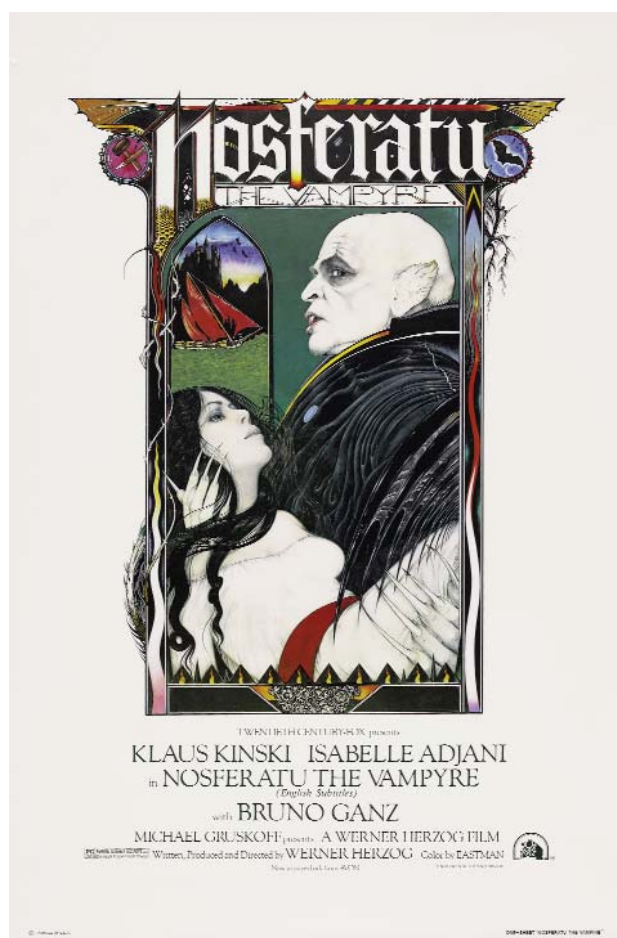


Figure 9: A metaphor of disease.

If we were to literally follow the title of this article and include in the list films related to the major health determinants in communities, even a book would not be able to cover everything that should be included. Were that the case, any film showing wealth and its social distribution, education, collective equipment, sanitation, food monitoring and control and a long etc. should be taken into account. Certain titles mentioned in this article might serve as illustrative examples, even though it is difficult to find a film that gathers together all these elements and at the same time maintains commercial expectations. It is worth mentioning, however, *Black Rain/Kuroi Ame* (1989) by Shohei Imamura, a film that, although its main focus is not an infectious disease but the epidemic consequences of the nuclear bombing of Hiroshima in 1945, provides a reflection on a comprehensive group of elements that play an essential part in shaping our perception and experience, both individual and collective –including the Public health System–, of an epidemic reality that is destructive at all levels (figure 10).



Figure 10: The epidemic consequences of the nuclear bombing of Hiroshima.

References

1. Vives C, Álvarez-Dardet C, Caballero P. Violencia del compañero íntimo en España. *Gac Sanit* 2003; 17(4): 268-74. Available from: <http://www.scielosp.org/pdf/gs/v17n4/original1.pdf>
2. Farmer P. *AIDS and Accusation: Haiti and the Geography of Blame*. Berkeley and Los Angeles: University of California Press; 1992.
3. Seale C. *Media and Health*. London: Sage; 2004.
4. Tabernero Holgado C. *Discursos y representaciones médico-sanitarias en el cine documental colonial español de la posguerra (1939-1950)*. Barcelona: Centro de Historia de la Ciencia (CEHIC) / Universidad Autónoma de Barcelona, 2010. Available from: <http://www.recercat.net/handle/2072/97216>.
5. Kolker R. *A Cinema of Loneliness*. New York: Oxford University Press; 2000.
6. Tabernero Holgado C. L'Audiència-meca: ciència, tecnologia i la condició humana en el cinema de Stanley Kubrick i Steven Spielberg. *Mètode* 2006; 48: 71-76.
7. Eisenberg L. Disease and illness: distinctions between professional and popular ideas of sickness. *Cul Med Psychiatry* 1977; 1(1): 9-23.
8. Duden B. *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany*. Cambridge, Massachusetts: Harvard University Press; 1991.
9. Honorato J. *Enfermedades Infecciosas en el Cine*. Madrid: PBM, 2003.
10. García Sánchez JE, García Sánchez E. La gripe en el cine. *Influenza (Flu) in the cinema*. From the apparently banal disease to the apocalyptic pandemic. *J Med Mov [Internet]*. 2006; 2(1): 1-2. Available from: <http://revistamedicinacine.usal.es/index.php/en/vol2/num1/506>
11. Icart-Isern MT, Rozas-García MR, Sanfeliu-Cortés V, Viñas-Llebot H,

⁹To mention only a few of the films that make up the wide range of vampire and zombie films might seem meaningless; however, being comprehensive with examples is not the focus of this article, nor its length allows it. See, as a review, Mendiguchía Olalla and Santiago Lardón¹⁷, or Rodríguez Sánchez (in this issue)²¹.

- Fernández-Ortega MP, Icart MC. El cáncer en el cine. Un recurso para los profesionales de la salud. *Educ Med* 2009; 12 (4): 239-246.
12. García Sánchez JE, García Sánchez E, Merino Marcos ML. Terminal Cancer Patients on Movie Posters (I). *J Med Mov* [Internet]. 2007; 3(1): 42-45. Available from: <http://revistamedicinacine.usal.es/index.php/en/vol3/num1/483>
13. García Sánchez JE, García Sánchez E, Merino Marcos ML. Terminal Cancer Patients on Movie Posters (II). *J Med Mov* [Internet]. 2008; 4(3): 137-140. Available from: <http://revistamedicinacine.usal.es/index.php/en/vol4/num3/387>
14. Montiel L, Porras I (coordinadores). De la responsabilidad individual a la culpabilización de la víctima. Aranjuez: Doce Calles; 1997.
15. Jiménez Lucena I. Differences, paradoxes and exclusions regarding abortion. A possible interpretation of *A Story of Women* and *Vera Drake*. *J Med Mov* [Internet]. 2011; 7(2):61-68. Available from: <http://revistamedicinacine.usal.es>
- 16.- Aguilar P. La violencia contra las mujeres en el relato mediático. *Claves de Razón Práctica* 2002; 126: 75-78.
17. Mendiguchía Olalla I, Santiago Lardón JA. La medicina en el cine. Madrid: PBM, 2003.
18. García Sánchez JE, García Sanchez E, García Merino E. Tuberculosis and Movies: An Approximation through the Fantasy of more than 400 Films. *J Med Mov* [Internet]. 2010 ; 6(3-4):91-346. Available from: <http://revistamedicinacine.usal.es/index.php/en/vol6/num3/614>
19. García Sánchez JE, García Sánchez E. "Biopics" * about physicians: from the reality to the film. *J Med Mov* [Internet]. 2006; 2(2):41-43. Available from: http://www.usal.es/~revistamedicinacine/Volumen_2_1/n2/ing_2_pdf/edit2.2in g.pdf
20. Perkwitz S. Hollywood science: movies, science and the end of the world. New York: Columbia University Press, 2007.
21. Rodríguez Sánchez JA. Vampirism as a metaphor for addiction in the cinema of the eighties (1987-1995). *J Med Mov* [Internet]. 2011; 7(2):69-79. Available from: <http://revistamedicinacine.usal.es>