Television fiction viewed from the perspective of medical professionals

House and Medical Diagnosis, Lisa Sanders
The Knick and Surgical Techniques, Leire Losa
The Sopranos and Psychoanalysis, Oriol Estrada Rangí
The Big Bang Theory and Asperger’s Syndrome, Ramon Ceretals
Breaking Bad and Methamphetamine Addiction, Patricia Robledo
Mad Men and Tobacco Addiction, Joan R. Villalba
The Walking Dead and Epidemics in the Collective Imagination, Josep M. Comelles and Enrique Perdiguero Gil
Angels in America, The Normal Heart and Positius: HIV and AIDS in Television Series, Alina Coclet and Marc Coclet, under the supervision of Bonaventura Coclet
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Masters of Sex and Sexology, Helena Boadas
CSI and Forensic Medicine, Adriana Fané, Marta Tomàs,Josep-Eladi Baròs and Magí Fané
Homeland and the Emotional Sphere, Llana Vehil and Luis Lalucat
Olive Kitteridge and Depression, Oriol Estrada Rangí
True Detective and the Attraction of Evil, Luis Lalucat and Llana Vehil
Polseres vermellles and Cancer, Pere Gasçón i Vitaplana

Editor: Toni de la Torre
Medicine in Television Series

Editor: Toni de la Torre
The Fundación Dr. Antonio Esteve (Esteve Foundation), established in 1983, has the main aim of encouraging progress in Pharmacotherapy through communication and scientific discussion.

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Introduction

Toni de la Torre

Medicine and television series have been symbiotically conjoined for more than half a century. Of all dramatic genres in serialized fiction, the medical genre is the one most firmly rooted in the origins of televised fiction. It is one of the foundational genres of the series and, in contrast to the western (inherited from film), and the sitcom (hailing from radio), medical drama formed, alongside police series and legal drama, a type of fiction inherent in series, that came into existence with the medium. These are known as workplace programs (fictions set in the workplace), whose structure arose with the earliest television series. Their construction is closely linked to the creation of the narrative language of this new medium, which until recently was considered a lesser medium, albeit highly popular. Doctors, the police and lawyers were the main stars in this format of televised fiction, and doctors tend to be more frequently identified with the world of TV series.

Such an association is due to two reasons. Firstly, it is a question of clarity. Lawyers and police have often shared a screen in the same series, both genres frequently overlapping (a paradigmatic example is that of Perry Mason, who practices as both a lawyer and detective), while the medical drama has rarely mixed with other genres, remaining more sharply defined. The second reason can be found in the medical drama’s preference for the serialized format. While police drama has had a prolific presence in film (even more so than on the small screen), medical practice has found its foremost means of representation on television, with the doctor’s white-coated figure most commonly identified as the hero in TV series.

This popular perception was also consolidated by the fact that the presence of the medical drama in serialized format has been a constant for decades. The genre had its premier in 1951 with City Hospital1 on CBS, the first series in the genre. Since then, there has always been a medical series on air in the US, with the sole exception of a four-year period from 1956 to 1961 (from the last episode of NBC’s Medic to the premier of Dr. Kildare on the same channel). From 1961 to the present, US viewers have always had reference to a fictitious hospital, making the medical professional a constant figure in the collective imagination created by television2. The genre, far from becoming jaded, has managed to reinvent itself over time—as we will see in this book—and its popularity remains strong even in the new era of TV series, in which they have achieved unheard-of prestige. The arrival of new ideas and risky creative series have not shouldered medical dramas aside. In the midst of this creative revolution in TV series, as many as three medical series have been on air at one time. From 2005 to 2009, the veteran show ER, the recently launched House and Grey’s Anatomy, still on air, were being broadcast on NBC, FOX and ABC respectively. All three attracted a large and loyal audience, good reviews in the press and the recognition of the television industry, the three shows collecting 32 Emmy Awards between them.

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1 Throughout this volume, italics will not be used for the names of series, since there are too many and this would interfere with comfortable reading of the book.
2 On the next page, see the chronology of the main medical series broadcast in the US from 1953 up until the present.
CHRONOLOGY OF THE PRINCIPAL MEDICAL SERIES IN THE US

General Hospital
(1963-Present)

The Doctors
(1963-1982)

M.A.S.H.
(1972-1983)

St. Elsewhere
(1982-1988)

Marcus Welby M.D.
(1969-1976)

Northern Exposure
(1990-1995)

Er
(1994-2009)

House M.D.
(2004-2012)

Grey's Anatomy
(2005-Present)

Medical Center
(1969-1976)

Quincy M.E.
(1976-1983)

Dr. Quinn
(1993-1998)

Chicago Hope
(1994-2000)

Nip/Tuck
(2003-2010)

Nurse Jackie
(2009-2015)

Dr. Kildare
(1961-1966)

City Hospital
(1951-1953)

Medic
(1954-1956)

Northern Exposure
(1990-1995)

China Beach

The Knick
(2014-Present)
Of all three fictions, ER tends to be considered the medical drama of reference, not simply for the number of awards it has reaped during its lifetime (of those 32 Emmys, it won 23) but because, furthermore, it is the fiction in its genre that has been longest on air in the US, with 15 seasons and 331 episodes. Its figures lag behind the British program Casualty, which is the longest-running medical drama: it was launched on the BBC in 1986 and is still on air. In its time, it was the English answer to the North-American St. Elsewhere, a founding medical drama that standardized the forms of the genre in the eighties. Nevertheless, Casualty is less able to exert influence than North-American medical dramas, which are exported to numerous countries and end up playing a greater role in forming collective imagination concerning medicine worldwide than television generates. (In this respect, it is no different to other genres since the predominance of the North-American television industry is absolute in terms of fiction exports.)

Only General Hospital surpasses both ER and Casualty in duration, but they are not generally compared like to like given that General Hospital is a soap set in a hospital rather than a medical drama, a crucial difference for many reasons. (The technical expertise, acting quality and creativity in the soap opera genre are far below drama in terms of quality, and in fact, the manner of filming and broadcasting are completely different, as well as viewers’ perception of them.) Nevertheless, that does not mean that this medical soap’s resilience in US programming, where it launched on ABC in 1963 and still airs (over 13,000 episodes broadcast), is not a good example of the ongoing presence of hospital fiction on television, or of the unquenchable popularity that medical stories have among viewers.

General Hospital is also the most referenced medical series, to the point where it even appears in other hospital series such as House M.D. (Dr. House never misses a single episode of the fictitious series Prescription Passion, which is a parody of General Hospital) and others which have nothing to do with the genre, such as Friends. (The character Joey, who is an actor, gets the part of a doctor called Drake Ramoray, who is simultaneously a parody of one of the doctors in General Hospital, Dr. Noah Drake, and a parody of another soap, Days of Our Lives, broadcast on NBC, the same channel as Friends.) When all is said and done, General Hospital is the series that most helped consolidate the hospital as a fictional setting, consequently shoring up the medical drama genre in the North-American television tradition.

The hospital as a dramatic setting

The medical drama has its basis in the very foundations of serial fiction, characterized by offering viewers an episodic narration that develops over time (far a longer period than in other media, and naturally much greater than in film) and follows the lives of specific characters in a stable universe. Its serial nature is defined to a certain extent by repetition: In each fictional episode, viewers encounter a number of repeated elements, starting with the same theme music (the repetition of which fulfills a ritual function), the same characters, the same place and often, moreover, the same manner of resolving plot conflicts. This repetition has soothing effects on viewers—who enjoy witnessing the development of what they already know, something which has elements they can more or less predict—and constitutes the key to the creation of a fictional universe that is stable in time.

The universes created in TV series have features that tend to seek viewers’ well-being, being spaces in which viewers want to lose themselves. One of the fundamental rules of classic series is the use of resources that aim to encourage viewers to return each week to see the next episode. That means creating universes one wants to be a part of—at least for the duration.

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3 Broadcast in Spain under the name Hospital and in Catalonia with the title A cor obert. In Latin America it was called Hospital San Eligio.
4 This is in contrast to other founding genres in TV series, such as the western, which despite the huge popularity it enjoyed in the fifties, sixties and seventies, ended up being shunned within the medium. Nowadays westerns hold a residual position, the main contemporary examples of the genre being Deadwood, Hell On Wheels and Justified.
of the broadcast— and characters one wants to get to know. Naturally, I am referring, above all, to the series from the fifties and sixties, which was when the medical drama was created. In later series, the techniques for capturing the audience’s attention were adapted to other ways of understanding serial fiction. So, the cliff-hanger or change of direction in the script are two of the most popular in contemporary series, where the repetition of elements and stable universes have given way to the fiction of innovation.

These stable universes have their origins in the television set’s domestic nature, prompting the medium to create fictions that seek viewers’ comfort. In such universes, audiences find a second home of which they form part every time they sit down to watch. The universes in traditional series are Arcadias boasting an established order that can definitively be altered only with difficulty. Viewers know that a conflict that endangers the nature of the universe in question is possible (for example, an argument between two characters), but they also know that in most cases the conflict will be resolved to ensure that the universe remains unaltered. In the classic serial structure, such universes have a huge capacity for resisting change (to the extent that time appears suspended, without characters progressing on in their lives as they would were they real), while the contemporary series take more risks and introduce changes over the seasons that alter the series’ universe. Whenever an event of this nature occurs, such as the death of one of the protagonists, it is traumatic for viewers because the fiction in which they live through the television set changes for good.

The medical drama (and other variants of workplace programs) use a story type that in television script slang is known as episodic to introduce dramatic events that do not greatly affect the main characters and so do not alter the universe of the fiction. Normally, they tend to be related to non-habitual characters, used only in a specific episode, and arise from the characters’ professional work. In medical dramas, the central character in this plot type is a patient, whose story is presented, developed and resolved in an episode. Meanwhile the storylines of the hospital medical team evolve. They are the true main characters, but their plot lines often have more to do with their personal than their professional life. Sometimes, a patient’s storyline may have a stronger influence on one of the stars, acting as the detonator to a conflict, serving as a parallel to something that is happening in the doctor’s personal life, or showing a new facet of his or her personality, especially when dealing with medical cases with an ethical conflict. In specific cases, the episodic storyline can transform the protagonist, but that is not its main function.

This division between professional and private life has been a feature of medical dramas since their beginnings: Part of the interest generated from exploring the daily goings on in a workplace is in getting to know the workers intimately (not just their occupational side). Nevertheless, the use of spaces has varied over time. In series in the fifties and sixties, the universe of the medical drama was divided in two: One part of the story evolved in the hospital and another part at the medical professional’s home, a legacy of the family series, which was very popular in its day. This was the structure followed by one of Spain’s most successful medical dramas: Médico de Familia. Its storylines in Doctor Nacho Martín’s hospital were blended with the character’s daily life at home as a father and head of the family. The hospital as a space for fiction gained in prominence in medical dramas from the eighties onwards, with the North-American series St. Elsewhere. Here, the building became a place with its own life, another character in the series through which hundreds of people’s lives circulated. So it enjoyed a life independent of its protagonists. This new structure, more focused on the setting where the medical profession was practiced, is what the series Hospital Central adapted to Spain. This is the latest successful medical drama in Spain.

Note that the trends governing TV series tend to reach Spanish television late, since Médico de Familia was launched in 1995 and Hospital Central in 2000, both much later than the international series that inspired them.
The growing importance of the hospital space in medical dramas is reflected in the treatment it receives in fiction. It goes from being a neutral space that could be any hospital (from standardization) to a place with its own personality (personification). It is easy to mention the names of some of these fictitious institutions and for viewers to know perfectly well which series we are speaking of. Names such as St. Eligius, County General Hospital, Princeton-Plainsboro Teaching Hospital and Seattle Grace have become associated with medical dramas that used the hospital as the epicenter of its fictional universe. The North-American series St. Elsewhere was the first medical drama to foreground the hospital institution, in a change that formed part of a trend in televised fiction that had begun a year earlier with Hill Street Blues – both series were by the same producer, MTM Enterprises. The focus on the hospital enabled the medical drama to sink its roots into a particular neighborhood with a specific socio-economic situation, broadening the type of comment that could be made as a genre. This point will be developed below.

Within series set in workplaces, there is no doubt that a hospital is a unique venue to create scenarios that hold narrative possibilities. This is not just because it is a space through which an infinite number of anonymous individuals may pass (meaning an infinite number of possible storylines), but because, furthermore, the stories unfolding in such a setting tend to have great dramatic potential. It is also a setting that appeals to viewers of all kinds because conflicts linked to health connect to a broad audience. Health is a common concern among audiences that are a priori highly diverse. The doctors and medical team are at the drama’s epicenter and are the heroes and heroines ensuring that these anonymous stories cheat their final destiny, delivering a happy ending that causes an emotional catharsis in the TV audience.

The figure of the doctor in series

From the very beginnings of serialized fiction, the figure of the medical professional has been placed in the same category as the sheriff in westerns or the detective in police series. This says a lot about the way the television medium has traditionally represented doctors: as heroes who save lives, but who, instead of using a revolver or showing a sheriff’s badge, wield a scalpel and white coat as symbols of authority. Doctors perfectly fit the definition of the classical television hero in the sense that their cause is noble and their nature altruistic. They tend to value others above themselves, sacrificing themselves to long working days and always doing everything possible to save their patients. The archetype of the healer notably underscores the portrait of the television doctor, whose capacity to heal those who need it makes them a figure to admire and in whom viewers can blindly lay their faith. The sheriff protects us from the Indians, the police inspector from criminals and the doctor from diseases. At heart, they all look out for our safety. This is an idea that connects with comfort fiction, which we mentioned above, converting the medical professional into a character with a friendly and understanding disposition.

The protagonists of the early medical dramas, such as Dr. James Kildare (from Dr. Kildare), were the prototype of a doctor for whom a reassuring smile and a slap on a patient’s back were enough to gain their trust. “It’ll all be fine” was what the character played by a young Richard Chamberlain conveyed. His faculties surpassed those of a medical professional. Despite his mentor, Dr. Leonard Gillespie, warning him that he should limit himself to the sphere of medicine, the protagonist in this classic medical drama often took his medical practice further and became his patients’ advisor, such was the sense of security he transmitted. So we are dealing with an authority figure to whom are attributed knowledge and wisdom in the sphere of life in general that exceed the competencies of a medical qualification, who generates respect around him yet at the same time is intimate enough for the sick to come to him with problems outside the health sphere.

The figure of the friendly doctor was perpetuated and was the prevailing view until the end of the seventies. Dr. Marcus Welby, the star of Marcus Welby M.D., better personifies than anyone that doctor who does his utmost for his patients,
and who we often see holding vigil at his patients’ bedside. One of the central pillars of this series was the conflict between the protagonist and Dr. Steven Kiley, since they often disagreed on what methods to use. This friction would become a habitual type of conflict in medical dramas, but in this case, despite one tending to adhere to the letter of the medical books and the other following less orthodox paths, they both have the patient’s well-being as their central concern. They are simply heroes with different approaches with regard to medical practice.

The figure of the doctor began to mutate in St. Elsewhere, a series cut in a far more realistic mode, where we find Dr. Mark Craig, a character who puts his own interests above medicine. He abandons St. Eligius for a better-paid job and only returns to the center when he is promised a pay rise and better equipment. He is portrayed as a medical star, an easily irritated, irascible genius, who has the habit of ridiculing his colleagues with ironic comments. His risky operations, such as a heart transplant, make him a significant asset to the hospital, demonstrating to viewers that enduring his personality is a fair exchange for his skill as a doctor. The profile is similar to Dr. Gregory House, expert diagnostican in the series House M.D. The difference between them is that Mark Craig is just one character in a fictional chorus of other doctors who personify the view of the kind-hearted doctor of earlier decades, while Gregory House is the protagonist in his series and the absolute star of the show, personifying a new type of doctor corresponding to the anti-hero archetype.

The emergence and popularity of the anti-hero is not exclusive to the medical drama. House’s success should be read within the context of the transformation experienced by TV series due to the ground-breaking US cable channel phenomenon, which introduced fictions that, among many other aspects, featured morally complex characters. Tony Soprano, in The Sopranos, is the archetypal modern television anti-hero, a subversion of the classical hero’s values yet one who manages to connect with viewers through his anxieties and weaknesses, and a basic influence in modern anti-heroes we find in series such as Breaking Bad or Dexter. In the medical drama, the adoption of this model of protagonist has led to the emergence and popularization of a model of doctor characterized by a disagreeable nature and a dehumanized approach to medicine.

If traditional fictitious doctors were essentially noble and altruistic, always at the service of their patients, whose well-being they considered a priority (reassuring manner included), the new doctors in fiction would be egotists who would not take their patients into account. They would consider patients an obstacle in their profession and treat them unpleasantly. Lack of orthodoxy would be another key element. Anti-heroes in the medical drama would be reticent to follow the hospital rules, would make decisions that risked the lives of others, including patients, and generally scorn any other opinion. Their priorities would have more to do with the personal satisfaction of being able to solve a puzzle (the patient) than with curing a person who needed their help. Leading this trend of the medical anti-hero is the aforementioned Dr. House, who was and remains the most popular of this new type of medical professional, though the character, who premiered on North-American television in 2004, has several precedents. It is worth mentioning Doctor John Becker, from the series Becker, played by Ted Danson, who in 1998 was already a bad-tempered politically incorrect doctor, or Doctor Vilches, from the Spanish series Hospital Central, which the actor Jordi Rebellón began to play in 2000 (though in this case in a supporting role, like Dr. Mark Craig). The incursions of the North-American cable channels into medical drama have bequeathed other hospital anti-heroes, such as the pair of surgeons in Nip/Tuck (2003), Nurse Jackie Peyton, in Nurse Jackie (2009), or Doctor John W. Thackeray, in the historical medical drama The Knick (premiering in 2014).

Whether heroes or anti-heroes, all the doctors in medical dramas are characterized by their huge talent and skill. They are all extraordinarily well-prepared and capable of resolving high-risk situations and extremely complex operations. To find inefficient or irresponsible doctors, one has to abandon medical drama territory and go to
comedy, where series such as Scrubs, Green Wing or Children’s Hospital use precisely the responsible, idealized image that doctors tend to have onscreen in order to subvert it humorously. These comedies signal a break with an excess of seriousness and drama in medical series, and as such constitute a healthy exercise of demystifying the figure of the doctor.

Relationship with the medical community

One of the attractions of fictions set in workplaces is their ability to operate as a testament to the reality of professions that viewers find attractive, but of whose secrets they know few. Professions such as police officer or doctor are a mystery to viewers, who are curious to see the reality of daily life for these professionals and how their work dynamics operate. This factor is also key in other series that do not delve into traditional television professions, such as the west wing of the White House, enabling viewers to see how a fictitious version of a US presidential cabinet functions; or Mad Men, which shows the creative work behind advertising spots and slogans, taking us from the initial meetings with the client to the final version of the advert to be approved. In all these fictions, viewers assume that what they are watching is faithful and based on reality. So, they construe through these series an image of the reality of such professions.

The medical drama is no exception to this rule and wields inevitable influence in creating the collective imagination about the medical community and day-to-day hospital life. Even if such series make a realistic approximation of the profession, the mechanisms of fiction make certain license inevitable. Such license leads to one of the traditional criticisms made of these series by the medical community: they can create unrealistic expectations in viewers insofar as the medical instruments they are liable to find in hospital are concerned. The same goes for the death rate in specific situations, which tends to be higher in reality than in fiction. Both features are resources of the medical drama for imbuing greater heroism on the protagonists. No one wants to see doctors in fiction whose patients are not cured, or who die on the operating table too often. Though these situations occur in medical dramas, they are not particularly abundant because at heart they are fictions that convey, as we said above, feelings of comfort and security that are agreeable to viewers. The same occurs with medical instruments, which are more spectacular in these series, running the risk of recreating ultra-technological hospitals that do not reflect patient reality. Nevertheless, it is also true that medical dramas exist that have made the realistic recreation of medical equipment one of their features. So, series such as ER or House M.D. portray hospitals with the latest technology, whereas St. Elsewhere or Nurse Jackie show the reality of a lack of resources and waiting lists, taking the medical drama into the terrain of social drama. In this sense, criticism by the medical community that medical drama creates false expectations in viewers is valid, but only partially, since it cannot be applied to all series.

For medical dramas to be as realistic as possible, studies often employ medical professionals as consultants who work in close collaboration with the scriptwriters. The first chapter of this Notebook you are reading is written by Dr. Lisa Sanders, who was consultant on the series House M.D. However, as she herself says, there is an agreement between reality and fiction: Professional consultation, which is the medical community’s channel of influence on the fictions representing it, is strictly adhered to only until it clashes with the cause of fiction. In such cases, a decision by the scriptwriter of the episode or the series showrunner will choose between the realistic option and the one that works dramatically. Since the medical drama is no documentary, no such strict standards of realism can be enforced, so it is logical that what works best in the script carries more weight than what is more realistic.

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6 A 2008 report of the Organización Médica Colegial (Spanish Medical Association Organization) gave the example of cardiopulmonary resuscitation, whose results in fiction tend to be positive to a much greater degree than in real life.
The connection between medical dramas and the medical community has existed since the genre’s origins. The series Medic, launched in 1954, was the first to pay special attention to medical procedures. Since then, scriptwriters have worried about showing the work of medical professionals with detail and exactitude, often relying on consultation with doctors to ensure they are correctly representing reality. Initially, the scripts were sent to medical institutions to be reviewed. So, Dr. Kildare, the most popular medical series of the sixties in the US, welcomed the advice of the American Medical Association, which was credited at the end of each episode. And in the seventies, the series Marcus Welby M.D. had members of the American Academy of Family Physicians correcting errors in the scripts. Recently, independent consultants have been popular, employed by the studio or production house. They work continuously with the scriptwriters, offering constant feedback and even suggesting ideas for new storylines. As well as Dr. Lisa Sanders on House M.D., others in this category include Dr. Karen Lisa Pike and Nurse Linda Klein, who works for the series Grey’s Anatomy. A third possibility is that the scriptwriters are knowledgeable about medicine. This is notable in ER, which Michael Crichton wrote based on his own experience as a resident doctor at Boston City Hospital, and which used scriptwriters with experience in the profession, such as Joe Sachs, a general practitioner, and Neal Baer, a pediatrician.

Consultation with the medical community was crucial in introducing diseases unknown in fiction, which is one of the most interesting characteristics of medical drama as a genre. Throughout history, scriptwriters in many of these series have sought to introduce medical conditions with little or no previous screen time into their storylines, thereby helping to raise awareness of them. Dr. Kildare, a classic series, was the first to introduce epilepsy and the problems deriving from drug addiction. It would have been the first to treat other matters, such as sexually transmitted infections or the contraceptive pill, had the NBC Board of Directors not decided to reject the scripts of these episodes written by Jack Neuman, despite the fact he was supported by the then-president of the TV channel. Medical dramas are often crossed with controversial moral dilemmas that enjoy diverse acceptance according to society at the time, but the pressure of advertisers often acts in a censoring role. Despite this, throughout medical drama’s history, scriptwriters have managed to tackle difficult-to-swallow medical questions, thereby becoming (thanks to their large audiences and the public’s involvement in the fiction) a more effective vehicle for influencing public opinion than documentary programs.

The arrival of the seventies saw a sea change in this sense, with social realism opening a breach in the traditional series genres. In the medical drama, this gust of fresh air translated into fiction such as M.A.S.H., whose political comment on the Vietnam War, then in progress (though the series was set in the Korean War to camouflage its intentions), offered a previously unconsidered reading of the genre. The series, created by Larry Gelbart from the novel and film that preceded it, broadcast from 1972 to 1983, and was succeeded by China Beach, which premiered in 1988 and this time was set in an evacuation hospital in the city of Da Nang during the Vietnam War. In the eighties, the medical drama of reference was St. Elsewhere, which was striking for its realist approach and humble socio-economic context: St. Eligius was the hospital where patients turned up who had been rejected by other hospitals of greater prestige with better equipment. The series, created by the duo of Joshua Brand and John Falsey (who years later created another iconic medical series, Northern Exposure), dealt with previously taboo themes such as breast cancer. St. Elsewhere was the first series to tackle AIDS, in a 1983 episode entitled “AIDS & Comfort”. In it, the father of a family is diagnosed HIV-positive, which causes a certain nervousness in the hospital. He is led to reveal to his family the secret homosexual relationship he has with another man. St. Elsewhere’s example was followed in 1987 by the English series Intimate Contact, which was the first series whose theme revolved exclusively around this syndrome, having a protagonist who contracts the AIDS virus during a business trip when he has relations with a prostitute.
The first doctor to practice euthanasia in a fictional series was Dr. Roxanne Turner, also from St. Elsewhere, though she did not do so in the original series but in Homicide: Life on the Street. Actress Alfre Woodard recovered the character, who had abandoned St. Elsewhere in its fifth season, who we re-encounter working in a Baltimore hospice. In the episode, entitled “Mercy”, from 1998, she is accused of having practiced euthanasia on several terminal patients. Notwithstanding that ER was also a courageous series in this regard, it took far longer before it tackled the question of assisted suicide. It was not until a 2004 episode, entitled “Twas the Night”, in which Dr. Jing-Mei Chen practiced euthanasia on her own father, as he had requested in one of his few lucid moments. Dr. Pratt covers for her. She performs the act successfully and afterwards disappears, returning to China to bury her dead father and leaving her job at the County General Hospital for good. In the nineties, ER also covered topics such as organ transplant or barely recognized mental illnesses, while it also dealt with themes of a social nature like people trafficking or the rights of the gay community.

Lastly, it is worth highlighting the value of medical dramas as educational tools. Despite the fact that they often adapt reality to the conventions of fiction, the depiction of the work done in a hospital is accurate enough to be used in an illustrative manner by medical students. Joe Sachs, the scriptwriter and producer of ER, explains it in this way: “A medication that would take ten minutes to work [in real life] might take 30 seconds instead. We compressed time. [...] But we learned that being accurate was important for more reasons than just making real and responsible drama”. To viewers, medical dramas can also be a source of useful knowledge. In 2011, a woman suffered an asthma attack that left her unconscious and her ten-year-old daughter practiced cardiopulmonary resuscitation as she had seen on Grey’s Anatomy, a series she used to watch every week with her mother. This anecdote cannot be generalized nor should one deduce from it that a course in first aid may be substituted for a television series, but it does tell us that watching a medical drama gives viewers more tools than those that the show itself aims to, since series do not set out to educate viewers but to entertain them.

Transformations of the medical drama

Television series are currently experiencing one of the most interesting creative periods in their history. The medium has managed to achieve prestige that was unimaginable years ago. It is the result of changes in the television industry that have led to the recognition of scriptwriters as authors and the creation of series with artistic ambitions that go beyond what was formerly considered mere entertainment. This transformation has also made itself felt in the structure of the medical drama, which in the last decade has combined the realization of a traditional formula of workplace programs with the exploration of new ideas that aim to innovate the genre. Among the most relevant changes are an interest in barely explored disciplines in the medium, such as plastic surgery (the Nip/Tuck series, 2003), gynecology (the English fiction Bodies, 2004) and sexology (in the series Masters of Sex, 2013), which broaden the viewpoint of the traditional medical drama, often centered on general medicine.

Fusions with other genres have also occurred, with mixed results. Making the doctor an action hero by imposing a fast pace on the medical drama is something that has been tried several times with rather unpromising results. This is the case of the 2009 North-American series Trauma, focused on a group of paramedics, and of the 2015 British series Critical, which promised operations in real time. Neither of these were well-received, either by the critics or by viewers. In contrast, the merging of medical drama and historical drama in The Knick, the Steven Soderbergh series that premiered in 2014, stood out as one of the best televised fictions in that year. Set in an early-twentieth-century hospital, the series revisits some of the genre’s key features, such as the figure of the anti-hero, rivalry between doctors, ethical conflicts and episodic cases, before a background that enables the creation of a historical portrait depicting social conflicts like racism and class differences, practices such as
the sale of corpses, or surgical techniques that to modern-day viewers are extremely rudimentary. All this with a suitable taste for blood and arresting images that governs much of current TV fiction.

However, the most interesting element in the current transformation of the medical drama is that its themes are appearing in series that are not framed within the archetype of the genre. Medical questions, for years contained within hospital series, are now appearing in series of all kinds. This volume contains essays on traditional medical series such as those we have discussed in this introduction, but also on series that a priori do not qualify as medical yet still contain enough elements from the genre to be analyzed here. The expansion of this content outside of the limits of hospital fiction in the last instance benefits medicine. And medicine’s presence in the collective imagination shaped by TV series is increasingly stronger. In any case, we believe that a detailed analysis of certain key cases is overdue. This analysis we leave in the hands of the true medical professionals: the experts in each of the medical disciplines who have participated in this book with their reflections concerning how the series reflect their profession.

The first chapter contains an analysis of the series House and its view of medical diagnosis. The second postulates whether The Knick is as rigorous as it seems with a passionate journey through the history of surgery. The third chapter analyzes how a series as prestigious as The Sopranos has made psychoanalysis the key to the creation of its protagonist. The fourth chapter asks in what way the TV series The Big Bang Theory has helped to raise awareness and popularize Asperger’s syndrome, virtually unknown to the wider public until recently. Chapter five is an essay on drug addiction as shown in the series Breaking Bad while the sixth chapter looks at how tobacco addiction is treated in a period series like Mad Men. Chapter seven covers The Walking Dead as if it were a medical series, treating the problem of zombies as a traditional epidemic. The eighth chapter looks at how the social problem of AIDS has been dealt with in three very different fictions. The ninth and tenth chapters are devoted to the two medical disciplines most recently depicted on TV: firstly, an analysis of plastic surgery in Nip/Tuck and Grey’s Anatomy; then we focus on sexology and the stars of Masters of Sex. Chapter eleven deals with forensic medicine, one of the most frequently recurring specializations on television, analyzing CSI, the series which popularized it. In the following three chapters, we explore the emotions of three characters: Carrie’s bipolar disorder in Homeland, Olive’s depression in the mini-series Olive Kitteridge, and Rust’s path towards evil in True Detective. The final chapter is concerned with cancer as shown in the series Polseres vermellones (Red Band Society), closing this Notebook of the Esteve Foundation. Our aim is to give medical professionals a panoramic view of how their profession is reflected in TV series, and to give fans of the series a fresh viewpoint, one that is unexpected, interesting and enriches their favorite fictions.
House and Medical Diagnosis

Lisa Sanders

Gregory House marked a before and after within the genre of medical series. The concept of an anti-hero as hero did not merely transfer with remarkable success onto the cable TV networks, but furthermore it managed to earn the interest and respect of many health professionals. After eight seasons on the FOX network (2004–2012), 177 episodes and numerous awards, among them two Golden Globes for Hugh Laurie as Best Actor, House continues to be studied in the university sphere and in prestigious medical journals such as The Lancet.

The doctor turns his piercing blue eyes to the strangely discolored middle-aged man seated before him. Peering over his long, thin nose, the physician had the look of a predator examining prey. “Unfortunately,” he informs the man coolly, “you have a deeper problem. Your wife is having an affair.”

“What?!” the man exclaims, astonished by this strange and unsought diagnosis. The doctor casually twirls his cane as he considers his patient, who had come to see him with skin the color of a carrot, but complained only about a pain in his back following a vigorous golf game. “You’re orange, you moron,” he explains irritably. “It’s one thing for you not to notice, but if your wife hasn’t picked up on the fact that her husband has changed color, she’s just not paying attention.”

This is the first exchange between Dr. Gregory House and a patient who’s come to him for help in the first episode of the Fox Television program, House MD. And right from the start we are tipped off to the link between House and his inspiration, the most famous consulting detective of all time, Sherlock Holmes.

From our initial encounter with the character, House establishes himself as an observant, intelligent, arrogant man. Prickly, even rude at times, he is nevertheless a master of deduction, equipped with a ruthless flair for the dramatic revelation. Those familiar with the Canon will hear echoed in this meeting the reader’s first encounter with the detective in A Study in Scarlet. Within minutes of his introduction to future amanuensis, Dr. John Watson, Holmes announces, “You have been in Afghanistan, I perceive.” He does not reveal his route to this deduction for several weeks and nearly a dozen pages. When Watson begs for an explanation, Holmes traces the observations and thought process which makes this, like all deductions, seem so simple, at least in retrospect.

“Here is a gentleman of a medical type,” he tells the eager Watson, “but with the air of a military man. Clearly an army doctor, then. He has just come from the tropics, for his face is dark, and that is not the natural tint of his skin, for his wrists are fair. He has undergone hardship and sickness as his haggard face says clearly. His left arm has been injured. Where in the tropics could an English army doctor have seen much hardship and got his arm wounded? Clearly in Afghanistan.”

Arrogant, observant, intelligent; a little testy, perhaps, but a master of deduction, who clearly has a flair for dramatic revelation – though perhaps a little less ruthless. The parallel between the two was not accidental. Show co-creator, and executive producer David Shore, acknowledged the intentional homage from the start: “Anytime one says ‘puzzle’ and ‘brilliant deduction’ in the same sentence, one can’t help but
think of the great fictional detective Sherlock Holmes and his trusty sidekick, Dr. Watson. And indeed, Holmes—and the real-life physician that inspired him, Dr. Joseph Bell—were very much inspirations for House.

Echoes of the Canon are frequent within the show. The lead character’s last name, House, is a synonym of Holmes (a near homophone to homes). House has only one friend, James Wilson, a parallel to Dr. John Watson. House plays the piano, the guitar, the harmonica; Holmes distracts himself with the violin. House takes Vicodin, Holmes, cocaine and both occasionally inject morphine or a derivative. Holmes was killed—at least temporarily—by Professor James Moriarty; House was shot and nearly killed by Jack Moriarty. Irene Adler was, to Holmes, The Woman. The first patient we see House save is named after her—Rebecca Adler. House pretends to have cancer to achieve one of his aims, a clear reference to the story The Adventure of the Dying Detective where Holmes pretends to have a deadly infection to catch his man.

Holmes and Watson refer to everyone by their last names. So too do House and Wilson. Holmes and House also share an unconventional personality and, a certain brusqueness of manner, particularly when deep into an interesting case. Even in their spare time similarities can be seen. Actor Hugh Laurie once likened House’s obsession with television, video games, and popular music to Holmes’ habit of listening to classical music or reading dull monographs for hours on end in order to relax his mind while pondering a case.

A doctor inspires a detective who inspires a doctor who inspires a show

House MD ran on Fox Television from 2004 to 2012. It was one of the most popular television shows of the decade. Indeed in 2009, it was the most watched television show on the planet with a reported 51 million viewers. Along the way the show garnered three Emmys (Best Script, Best Directing, Best Make up), four Golden Globes (Best Actor and Best Dramatic Series, twice each) and a Peabody. Plus awards from the Screen Actors’ Guild, the Writer’s Guild and many People’s Choice Awards.

It is said that success has many fathers, and here I will make my bid for at least a small piece of that paternity, alongside Sherlock Holmes. Since 2002 I have written a monthly column for the New York Times Magazine about medical mysteries. In my column, called Diagnosis, I tell the story of a patient with mysterious symptoms who seeks a doctor to discover their cause, I take readers into the diagnostic process and reveal the clues and deductions that lead the doctor/detective to discover the pathological processes causing the patient’s illness, and point the way to treatment or even cure.

It’s hard to remember, but at the beginning of this century—before House was a household name—diagnosis was not a topic of popular discussion. Indeed, if you look at what was in the media and entertainment world as an indicator of what was popularly or widely known, a diagnosis wasn’t a Holmesian process but a simple answer to the complex question presented by the patient. In these shows diagnosis was merely a springboard to the rest of the story. In programs from Dr. Kildare (1961–1966), to Marcus Welby (1969–1976) to ER (1994–2009), you may have a patient who comes to the doctor or hospital with some type of symptoms but the focus of the drama occurs before or after the cause is revealed. The diagnosis itself is a one-liner that gets you from one scene to the next.

For example, in ER, one of the longest running medical series, one of the ER doctors tells a patient, “I have the results from your blood exams. They show you have leukemia.” No fuss, no muss. Blood is taken, a test is performed, the answer, leukemia, is revealed, and the story returns to what it’s really about. In these shows diagnosis is like math. Fatigue and abnormalities found on blood tests equal leukemia. In fact, the diagnosis of this type of cancer is usually far more complex than that. Were there clues in the physical exam: a certain pallor in the face and eyes? An enlarged spleen? Perhaps there was some weight loss? None of it is important or even particularly mysterious when the diagnosis is just one small component of a different human drama.
Actually, I think doctors liked to portray their profession that way. The crisp precision of the science of illness and the certainty of diagnosis is a counterweight to the art of dealing with the complexities of human behavior and emotion. The simplicity of this fictional representation of the process disguises the uncertainty that surrounds all but the most basic diagnoses. To acknowledge this intrinsic lack of precision seems to make doctors uncomfortable.

The first two years of medical school do nothing to contradict the impression that I—and many of my fellow students—had about medicine. That there is a science to it; a precision and accuracy that puts it in the same class with all that we learned on the way to med school and in those first two years: chemistry, biology, anatomy, physiology. That it is well defined, well understood—in short, a science.

That impression falls apart in the third year of medical school when students are taken out of the classroom and put into the clinic and hospital where real medicine is practiced and the mystery of diagnosis is revealed and indeed, quietly celebrated.

On my first day in my medicine clerkship I went to the daily meeting that everyone in that specialty attends, called Resident Report. The meeting room was dominated by a large table. The doctor-trainees sat around the table. Students sat in the back with the wiser and more experienced doctor-teachers. One resident, as such trainees are called, describes a patient who came to the hospital, sick and in need of a diagnosis and care. The case is laid out before the audience of trainees as it revealed itself to the physician at the time: who the patient was; what he or she told the doctors; what the examination revealed; what the preliminary tests showed. And then the residents are challenged to figure out the diagnosis. They examine the data presented before them, ask additional questions, and try to reason backward, from effect (symptoms) to cause (disease).

In that first meeting, I watched in amazement as diagnosis revealed itself to be, not a math problem but a detective story. A Sherlock Holmes story set in its original setting—not in the sitting room at 221B Baker Street but in the exam room that inspired it. In this modern version that I witnessed, the residents play the role of the young Conan Doyle—physicians working hard to learn the basics of deduction and diagnosis, guided and corrected by the master—Joseph Bell, here played by the senior doctors who correct and guide and amaze when the pupils go astray.

Indeed, one might well say that House is the doctor Holmes might have been had Conan Doyle lived in the 21st century. It would have been impossible for Holmes to be a physician at the end of the 19th century when first penned by Conan Doyle. Joseph Bell, the doctor Conan Doyle modeled his character after, was admired for his remarkable skills as an observer, his mastery of the ephemera of his time—the local geology, regional accents, etc.—his powerful deductive reasoning and his flair for the dramatic. Despite his mastery of these fundamentals of diagnosis, they were virtually useless at that time. What good were these skills at the end of the 19th century? The science of medicine then was rudimentary. Although many diseases had been described, few were understood. There were no tests to confirm a suspected diagnosis. Moreover, even if those basics had been available, there were almost no effective treatments for anything.

In contrast, the end of the 19th century saw the first blossoming of the science of forensics. The most basic tools of the detective were coming into wide use. The first ballistics test was developed in 1835. Fingerprints were used in a criminal investigation for the first time in 1892. Mug shots were first used as a means of identifying those brought before the police in the 1870s in Paris. The widespread use of the telegraph allowed 19th century detectives to communicate quickly with police in other districts, near and far. The ultimately unsolved case of Jack the Ripper was perhaps the most famous application of the burgeoning forensic sciences at that time. In this investigation, teams of policemen conducted house to house inquiries throughout Whitechapel, the area where the murders were committed and forensic material was collected and examined, suspects were identified, fingerprint-
ed, photographed and interrogated and featured on front pages almost everywhere.

One can almost sense Conan Doyle’s frustration with his own profession. Even given the remarkable skills picked up from his years of observing Bell, there was virtually nothing you could do to help anyone medically. So his fascination with the process of observation and deduction and the accumulation of arcane knowledge—the fundamental tools of diagnosis—were easily translated into this new science. The science of crime and detection. Sherlock Holmes traded his newly invented stethoscope for a deerstalker cap and magnifying glass and the detective story was invented.

Back to his roots

If Holmes was a detective inspired by a doctor, I consider myself a doctor inspired by a detective. Indeed unravelling the diagnostic mystery has been my obsession since that first Resident Report. In my practice, and in my column in the New York Times Magazine. So, when I got a call from a Hollywood producer named Paul Attanasio who told me he was producing a show based on my column, I was intrigued. Would this legacy go full circle? It was an exciting possibility. Attanasio described his new show as a Law and Order type ‘procedural’, where in each episode the ‘criminal’ would be an unusual disease, to be tracked down and brought to justice not by police but by a special team of doctors.

The show had initially been titled Chasing Zebras, a reference to the medical truism that when doctors hear hoofbeats, they should normally think horses—common diseases. In this show the hoofbeats would be made by zebras—the rarities. The idea was immediately picked up by Fox television and funding for a pilot was “greenlighted”. However, Attansio and his team—partners Katie Jacobs and David Shore—soon realized that by focusing exclusively on the diseases, they were losing a key component of the drama—the human complexity. Said Shore, “When you are dealing with a procedural police drama, you’ve got all these motives. You’ve got all these people hiding things. Germs don’t do that obviously. You don’t have one germ framing another germ because he was sleeping with the first germ’s wife.”

Although what Fox wanted, and paid for, was a reliable procedural—the case-of-the-week kind of crime show, like CSI, like Law and Order, known and loved by the other networks—it soon became clear to co-creators Attanasio and Shore, that they weren’t going to get one. Instead, the show was becoming more of a serial drama, a program that relies on story arcs spanning multiple episodes and relying heavily on the development of the core characters. These are less profitable for the producing companies because they are less flexible in reruns. And yet, it was clear to Shore that the doctor as detective structure required more of just about everything to make up for the lack of a bad guy. And that the doctor himself needed to embody the complexity normally spread out over an entire cast. “The more I worked on it,” Shore explained, “the less able I was able to make it work as a procedural [and] the more the character started to come alive for me.” That character became the guy we now know as Gregory House.

Once the pilot was shot there was some concern that the executives at Fox would be angry that the show wasn’t the case of the week type show they’d bought and paid for. “We pulled a bit of a bait-and-switch,” Shore acknowledged. The team debated how to handle this when the time came to show the pilot to the Fox executives who would be making the decision about whether the show would live or die. Attanasio suggested that they not tell Fox and let the show speak for itself. And speak it did. The show was put in the schedule for the following season.

That’s when I got the call from Attanasio. Would I work with the show to come up with the medical stories that would be at the heart of each program? Wow! I thought. My column—in Hollywood. I could hardly speak.

“Tell me more”, I asked, trying to sound casual—as if calls from studio executives came as often as those from nurses. It was about, Attanasio paused briefly, then continued carefully, a doctor who specialized in making difficult diagnoses. A doctor who was, and Attanasio paused again,
“irritable, arrogant, and drug-addled. A physician who hated patients, but loved diagnosis.”

The description triggered a brief war in my brain. That’s not how I wanted my magnificent obsession to be shown—as the product of some jerk, some badly behaved monster. On the other hand, showing diagnosis as a mystery to be unraveled, as detective story, and to the world well beyond the reach of my column, had tremendous appeal.

Of course, based on this description, I figured the show would be a flop. Normally I’m in the William Goldman school of thought about Hollywood—that nobody knows nothin’. But not that day. Hearing about a show centered on someone that seemed impossible to like (remember, this was before Breaking Bad) I figured it would last a season, maybe.

Drowning the cacophony in my head, I said, as casually as I could, “why yes, I’d love to work with the show”. Once I saw the pilot, though, I realized that I had been wrong. The show was brilliant. The actor they’d chosen to play House, a Brit named Hugh Laurie—who had previously been known for playing the dimmer partner in a duo with comic actor Stephen Fry—was mesmerizing as the unlikely hero in this medical dramedy.

On the surface, House was the horror Attanasio described—arrogant, irritable, rude; in short, utterly intolerable. And yet, somehow, when you, the viewer, looked into the eyes of actor Hugh Laurie, there was a sense that there was another House, a better House—a sensitive and damaged being lurking within that crusty outer layer. And the two of them were riveting.

Adventures in Hollywood

After I signed the contract, Paul arranged for me to come to LA and meet the writers and actors. Driving my rental car down West Pico Boulevard I tried to picture who I’d meet, how this would go. My heart raced as I drove up to the guard house at the entrance to the studio grounds and reported my arrival to a handsome middle-aged man (a failed actor?). I was given a map and pointed toward the building where I was to meet writers, producers and actors.

A tall well-built young man greeted me as I wandered into a low-slung building that looked like an old warehouse. The carpets were industrial and well worn. The walls were marked and a little dingy. But Dustin (as the young man identified himself) was cheerful and lively as he led me past a dozen or so small offices (“This is where the writers work”) into a large room that, though dominated by a large table, had the casual, well-used look of a college dorm rec room. Paul greeted me and introduced me to the writers—Tommy Moran, Peter Blake, Larry Kaplow, Sara Cooper, to the executive producer, David Shore, and medical consultant, Harvard-trained internist, David Foster.

We all sat down around the oversized table and just started talking. Several episodes of that first season came from that conversation. In particular, I recall a discussion of how patients’ wishes have to be obeyed, even if you think they are wrong. And that if you treat someone who does not wish to be treated you can be charged with assault. That discussion was brought to life in Episode 9 called DNR—a bout a jazz musician who, believing himself to have a terminal degenerative illness, asks that he not be resuscitated should his heart stop beating. House believes he has been misdiagnosed and so, when the man’s heart stops, brings him back from the dead. Of course House is found right—and eventually—and the musician lives. But not without first pressing charges.

I met Hugh for the first time during that visit. We chatted briefly and I told him that being a doctor was my midlife crisis, after a successful stint in television news. Hugh told me that his father had also become a physician as a second career. His first career was in the military and only when he retired, did he consider going to medical school. Was he channeling his father in any way, I asked—to starstruck to even hear what that implied about his father. Laurie smiled kindly and said his father was a very different kind of doctor. A general practitioner, he saw much more bread-and-butter medicine than House ever would. And, he added, it was odd to think that in one season of this show he would be making more than his father would make in a year. Strange, isn’t it? he added, thoughtfully.
Bicoastal production

Over the 8 years’ run of House MD I tried to go to Hollywood to visit the set at least once a year –but that was mostly because it was fun. Most of my job as technical advisor was done through email and phone calls. Writers would call with the character and overlying story and I (and eventually two other doctor-consultants) would try to come up with a disease and a story to fit.

The other part of my job was to identify inaccuracies in the script. It wasn’t quite as much fun as coming up with the stories themselves, but I recognized that how medicine is seen by the public depends at least in part, on how it is shown on TV. Very early on in season 1, one of the writers had House’s team put something in the mouth of a young man having a grand mal seizure to keep him from having his airways blocked by his tongue. That never happens in medicine. We are taught from our earliest days in med school that putting anything into the mouth of someone who is seizing will do more harm than good. While the intention may be to prevent the patient from “swallowing his tongue” as I was told as a kid in high school, a spoon in the mouth can block the patient’s airway and cause the patient to become hypoxic. When I pointed this out, the writer immediately changed the scene. As a result, House was one of the few programs that correctly represented the medical response to this very common type of seizure.

Of course, not all my advice was taken. In the second season, I got a script that contained an error that I felt needed to be corrected. Writer/producer Tommy Moran wanted to indicate some (umm, insert embarrassed cough here) oral-genital contact between two characters, so he had the young man contract an infection that could only be transmitted that way. House diagnosed the young man with bacterial vaginosis. As a dramatic tool, the diagnosis got the job done. However, it would be an unlikely diagnosis for a man. As with so many of the names of the diseases in medicine, the location of the infection is contained in the name –it is bacterial vaginosis (vagina + osis, meaning a state of disease.) This infection cannot move to the mouth; it’s not the right environment for the bacteria. However, even if it could, the infection would certainly not be called bacterial vaginosis but something like bacterial buccalosis (buccal –of or pertaining to the inner walls of the cheeks). In medicine the name of a disease usually does not reflect where the infection came from but where it ends up.

So, I wrote a lengthy email to Tommy explaining this issue and suggesting several other possibilities. I got back a one-line reply from Tommy: “Yeah. My way is funnier.” And so it was.

The Holmes-ian roots of House

I recently called some of the writers from House to ask them how they worked Sherlock Holmes into the character of House. Peter Blake, Liz Friedman, Sara Hess, Eli Attie were some of the best and most productive writers for the show. Most were involved from the start of the show until the very last days. And their answers were identical. They were never told that House was based on Sherlock Holmes. Never. Indeed both Blake and Friedman said that until they went to work on the series based on the premise that Sherlock Holmes is alive and working as a consulting detective in contemporary New York City, they were unaware of how closely House paralleled Sherlock Holmes. Only when they re-read the Canon did they see the links between the two characters.

Still, somehow Holmes is present in the stories and in the character of House throughout all eight seasons. How? Clearly it didn’t originate with the writers. Then who? It was Eli Attie who provided the clue to help me solve this mystery. Attie came to House in the show’s fourth season, after a long run at the NBC hit West Wing. Attie was the writer who came up with the story line that ended the series. In this 8th season’s long story arc, House’s best friend Wilson has metastatic thyroid cancer and is dying. And House is about to go to prison for driving his car into his old boss/girlfriend’s house –through the living room wall.

It seemed so unlikely –so un-House-like– that Wilson would just go quietly off to die as his friend sat in prison. So how were they to shape this set
of events into an ending, a good solid House-ian ending? The challenge went out to the writers. Who can come up with the exact right story to end the season and the show?

Attie had an ingenious twist. House disappears just days before he is to go to prison. There is speculation that he has run away. Instead, House has apparently been on something of a bender –he doesn’t remember clearly but wakes up to find himself in an abandoned building in a bad part of town, alone with a junkie who may have overdosed. Oh yeah and the building is on fire. As House starts to pull himself together he is visited by a woman who died a couple of seasons earlier. She serves as the ghost of Christmas past and present –confronting him with deeds and misdeed from the past several years. In between bouts of what is probably a drug induced delirium House becomes aware enough to realize that if he doesn’t get out of the burning building he will die. And he has to figure out how to get the other guy –the overdosing junkie– out as well. House is able to get out, but by then the other guy has died from his OD. House leaves his ID next to the guy and escapes the building just before it collapses into a fiery heap. Then he goes into hiding. When the body and ID are found, it is assumed to be House, giving him the chance to live on but with a new identity.

Attie was thrilled when David Shore chose his story to end the series. It wasn’t until after the show was shot and aired and the season finally put to bed that Shore told him why he chose his ending. That story arc paralleled the final chapter in the life of Sherlock Holmes. In The Adventure of the Lion’s Mane, Holmes describes his life at that moment. The story occurred “after my withdrawal to my little Sussex home, when I had given myself up entirely to that soothing life of Nature for which I had so often yearned during the long years spent amid the gloom of London.” Holmes has put away his deerstalker and retired to the country where he takes regular walks through the countryside, writes his learned monographs on cigar ash and other aspects of detection and, between the occasional mystery, tends his bees.

Like Holmes, House will retire from his old familiar world. Since he has allowed himself to be thought dead, he’ll have to come up with a new identity, a new profession. But first he and Wilson will ride their motorcycles through the country, finding fun and adventures as they may, until Wilson finally meets his maker and House will start life anew. Who knows –maybe he’ll even take up beekeeping.

Hearing Eli’s story, I finally understood that Holmes was embedded into House through the snark and sensibility of David Shore. Shore was channeling Sherlock Holmes, embedding his distilled essence into Gregory House. I asked Shore about this. He was modest in his reply. He’d always been a huge fan of Sherlock Holmes and felt strangely in tune with him. Shore, who was a lawyer before he abandoned that profession to become a producer in Hollywood told me that when he was representing someone he was more interested in seeking what he thought was the just outcome than in the people he actually represented and what they wanted. “It was a problem in the law. But that was what Holmes did, really. He pursued his own ideas of justice. He had his own very deep moral compass. Works a lot better on the page or the small screen than in a court room.”

“Are you then the medium by which Sherlock Holmes was channeled into the heart and mind of Gregory House?” I asked.

“Well, I’m not Holmes; I’m not House. But those words that come out of Hugh (Laurie)’s mouth –I almost always agree with them. I’m writing them because I believe them. They are my thoughts and my philosophy.”

In an interview Shore expounded on that philosophy –and for those who love Holmes, it has a familiar feel to it: “House could care less what people feel about what he’s doing, good or bad. He could care less about whether people tried their best. The only thing that matters to him is the result. Surprisingly, that makes him a bit of a rebel in our society.”
The Knick and Surgical Techniques

Leire Losa

The one thing Steven Soderbergh, winner of an Oscar for Best Director in 2001 for Traffic, had not declared when he announced his withdrawal from the film world in 2013 was that he was transferring his unique aesthetic to cable TV, to join a growing list of film directors who are investing their talent in this far less interventionist medium. This is what he has done in this historical drama that takes us back to the beginnings of modern surgery in a highly unconventional way. It is set in a New York hospital in the early twentieth century, and has an even more unusual protagonist: a reputable surgeon who is addicted to cocaine, played by Clive Owen (Closer, Children of Men). Its popularity has raised visibility for HBO’s younger sibling: the action channel aimed at the male Cinemax audience.

The Manhattan Dispensary was a hospital founded in Harlem, New York, in 1862, which survived until 1979. Throughout its history it received different names, but was known from 1913 onward as the Knickerbocker Hospital. This is where the series’ action is set, in 1900, taking as its main narrative referent the early steps of modern surgery and efforts to improve it technically.

To understand this period, one needs to briefly review the history of surgical evolution from its beginnings. Back then, surgeons were considered technicians, and were not always qualified, in contrast to doctors, who were the true healers. However, it could be said that both disciplines have always been closely related.

According to archaeological and anthropological studies, the earliest surgical techniques were employed to treat wounds and injuries. They included rudimentary cauterization, amputations and sutures, as well as cranial trepanning, dating back before 3000 BCE. Evidence shows that approximately 50% of individuals undergoing such operations survived.

Hindu medicine developed surgical techniques as diverse as methods for repairing the auricula of ears, rudimentary reconstructive rhinoplasty and even cataract operations.

In ancient Greece, Hippocrates was known as the paradigm of a doctor, to whom the definition of a surgeon is attributed, along with his modus operandi: “The things relating to surgery are: the patient; the operator; the assistants; the instruments; the light, where and how; how many things, and how; where the body, and the instruments; the time; the manner; the place. The operator is either sitting or standing, conveniently for himself, for the person operated upon, for the light... The nails should be neither longer nor shorter than the points of the fingers; and the surgeon should practice with the extremities of the fingers, the index-finger being usually turned to the thumb; one should practice all sorts of work with either of them... endeavoring to do them well, elegantly, quickly, without trouble, neatly, and promptly.”

Galen of Pergamon was known above all for being the personal physician of Emperor Marcus Aurelius. Nevertheless, he was considered a famous traumatologist, who repaired gladiators’ wounds and described new surgical techniques, such as reconstruction of a cleft lip or palate.

Interest in surgery did not take root among Arabian doctors, except in the case of Al-Zahrawi, the author of a compilation treatise in which he included sections that referenced ophthalmological, obstetric and odontological techniques, as well as hernia repair and hemostasis (aimed at staunching hemorrhages).
The Middle Ages was not an especially kind period for surgery, given that its theocentric world view conceived of disease as God’s scourge, with healing depending on a patient’s repentance. This made surgeons a second-best resort compared to God’s will. The founding of a guild of surgeons in London in 1368 is noteworthy. It aimed to separate these practitioners from barbers, who were the surgical precursors of doctors truly specialized in surgery as such. Nevertheless, the latter profession would continue their work of extracting teeth, blood-letting and minor surgery until the creation of the Royal Academy of Surgery in 1731, when that guild was finally prohibited from carrying out surgery. The second episode of The Knick, “Mr. Paris Shoes”, makes reference to this when Thackery turns to Christiansen and says “You are legitimizing surgery, taking it out of the barber shops and into the future”, in a clear allusion to its past.

Already in the sixteenth-century Renaissance, Vesalius gained fame as an anatomist, penning *De humani corporis fabrica*. The Spaniard Miguel Servet, who discovered pulmonary circulation, necessary for the oxygenation of the blood, was no less well-known. All these anatomical discoveries were favored by the freedom to conduct autopsies, which had been prohibited by the church and were punishable with death in the Medieval Period, should the practitioner be discovered. In the Modern Period, a real expansion in surgeons’ numbers occurred, bringing great progress to the specialization. The Frenchman Ambroise Paré is considered to be the father of modern surgery. He specialized in bullet wounds, designed prostheses for amputees, and made brilliant studies of Siamese twins. A curiosity from that period was the design of a special vehicle suitably equipped for the transportation of patients (the rudiments of today’s ambulance, identifiable in The Knick’s first episode, “Method and Madness”, as a horse-drawn carriage).

Not till the nineteenth century did the recognition and integration of medicine and surgery take place, with a victory over hemorrhaging, infection, and pain—the major obstacles this science had faced since its birth. Surgeons successfully managed to control hemorrhaging using hemostatic clamps, which were modifications of the clamps that Paré used to extract bullets. Another great contribution was the study of coagulation and the discovery of blood groups, which enabled transfusions to be made, as can be seen in the final episode of the first season of The Knick, “Crutchfield”. In the field of infection, in 1861, Semmelweis conceived the antiseptic principle with his work *Etiology, Concept and Prophylaxis of Childbed Fever*, which would later be enlarged upon by Lister with his pulverizations of carbolic acid (phenol) and by Bregan with the introduction of steam sterilization. In 1887, Mikulicz-Radecki, established the use of a cap, surgical mask and cotton gloves during surgical operations, substituted from 1890 onward by rubber gloves. The fight against pain is highlighted by the arrival of etereal anesthesia through inhalation. Later, less toxic anesthetics would appear, and an important milestone was the introduction of tracheal intubation by Trendelenburg in 1871. So many professionals from that period developed significant surgical advances that it would be tedious to list them all.

And what can be said about the twentieth century? It is characterized by significant progress in diagnostic methods, such as diagnostic sonography, endoscopy, magnetic resonance, and so on, that enabled less aggressive surgery, which, along with minimally invasive laparoscopic techniques, made it possible to reduce certain complications in conventional surgery while improving patient recovery times.

**Characters that become blurred with reality**

The series’ true protagonist and anti-hero, Dr. John Thackery, or Thack, becomes the head of surgical staff upon Dr. Christiansen’s death.

While Thackery is a brilliant surgeon, he is also arrogant and ambitious, and a user of opium and cocaine. He is obsessed with being remembered in history for some innovative surgical procedure that would bear his name, to be remembered by future generations of surgeons for contributing to medical advances.

There is no doubt that this character is based on the figure of William Stewart Halsted (1852–
1922), with whom he shares a great likeness. This man belonged to the glorious epoch of surgery’s development. Thanks to his research on physiology and pathology applied to surgical techniques, he was considered the father of modern surgery, specifically North-American surgery. Trained in both the United States and Europe under the most notable surgeons of that time, upon returning to the US he joined the staff of several hospitals, achieved fame and prestige, and gave classes in surgery. He undertook trials in his pathology laboratory, perfected intestinal suture techniques and experimented with dogs to research the curing of wounds and thyroid surgery. In 1890, he was named first surgeon in chief of the recently inaugurated John Hopkins University Hospital, and in 1892, he was appointed first professor of surgery at the school of medicine.

Halsted used cocaine as an anesthetic and even went so far as to take it, to the point where he had to undergo a detoxification cure in 1886, just like Dr. Thackery.

His assistant in the operating theater, Miss Hampton, suffered from dermatitis on her hands, so Halsted commissioned the Good Year company to create some rubber gloves to preserve them. Shortly afterwards, their use was extended to surgeons’ and to their assistants’ hands to protect the surgical field. We will see whether in future seasons Dr. Thackery does the same, since at the moment no trace of gloves or surgical masks can be seen.

Both the real and the fictional character were innovators in several surgical techniques, notable among which is the repair of hernias. Furthermore, the real person developed a technique to combat breast cancer, still known today as Halsted’s operation, consisting of a radical mastectomy of the gland and pectoral muscles, along with local and axillary ganglionic extirpation. The post-operative swelling of the arm after the aforementioned surgery is also known as Halsted Syndrome. There is an amusing situation in the seventh episode, “Get the Rope”, where Thackery and Halsted meet face to face in the operating theater anteroom and are introduced by Dr. Christiansen, the former’s mentor.

Another character who is, perhaps, based on a real person is Dr. Algernon Edwards. He is a black doctor, the top of his year, trained at Harvard and in Europe, who joins Knickerbocker Hospital as assistant chief surgeon, encouraged and supported by the hospital patrons, the Robertsons. He must contend with the racism that prevails in the hospital, both from his colleagues and from patients. Like Thackery, neither is he free from professional arrogance, which comes to the fore when he must face the daily disdain of his colleagues. We could say that Edwards is the alter ego of Daniel Hale Williams (1856–1931). Due to the racial discrimination reigning in that period, Afro-American citizens were banned from entering hospitals and black doctors were not employed as health personnel either. In firm opposition to this situation, in 1893, he decided to open the Providence Hospital and a nursing school, which became the first medical center with interracial staff in Pennsylvania. Likewise, in 1895, he co-founded the National Medical Association, a professional organization for black doctors as an alternative to the American Medical Association, which did not admit Afro-American members. A similar activity led Dr. Edwards to open his clandestine hospital in the Knick’s basement. Another of his achievements was to conduct the first successful open-heart surgery, without having the benefit of transfusion or modern surgical procedures, by suturing the pericardium (the membrane enclosing the heart) of a man who had received a knife thrust in his thorax.

It is not so clear that other characters have been influenced by famous historic figures. The women in the series are notable for their strength and individual determination: Cornelia Robertson, daughter of the hospital’s patron, Captain Robertson, who heads the Knick’s social welfare office; Nurse Lucy Elkins, who keeps both her relationship with Thackery and her addiction to drugs secret; and Sister Harriet, a Catholic nun who runs the orphanage affiliated with the hospital, who also engages in clandestine nighttime activity consisting of practicing abortions, which were illegal at that time. The other characters, though not at all dispensable, have more of a chorus role that gives the storyline solidity.
Premises of the series and subplots

The main storyline follows Dr. Thackery, a racist figure, addicted to cocaine and devoted to his work to the point of exhaustion. It allows us to explore one of the golden periods of surgery in terms of medical advances, through Nurse Elkins, with whom he establishes a relationship, and through his colleagues, doctors Gallinger and Chickering. The latter two, who are innovative in spirit, admire Thackery unconditionally, and accompany him through several steps of this surgical revolution.

Certain details worth highlighting throughout the series are the scientific advances revealed, for example, the application of x-rays for diagnostic purposes, and the perfecting of surgical devices and techniques.

In parallel, the series explores other subplots, such as xenophobia formulated as humiliations of a racist nature that Algernon Edwards must bear throughout the entire series, and the need to create a secret hospital to treat black people.

The difficulty of managing a hospital that is no charitable institution, given that its patients pay yet come along because it services a population sector consisting mainly of workers, means that its manager, Herman Barrow, must invent Machiavellian schemes to correct his own errors. He can think of nothing better than asking the mafia for help, resulting in innumerable problems.

Analyzing surgical techniques

Syphilis and rhinoplasty

Syphilis is a disease caused by a bacteria called *Treponema pallidum* which tends to be sexually transmitted, as occurs to Abigail Alford, who contracts it from her husband in the third episode, “The Busy Flea”. Syphilis patients can go through several phases. In the series we identify the ravages caused by benign tertiary syphilis, which appears from three to ten years after contagion and is characterized by the appearances of inflamed lesions, known as guamas, that evolve toward the death of the affected tissue. The loss of one’s nose was one of the most common effects of syphilis in the nineteenth century. This was such a frequent deformity that a specific “prosthesis” was invented for aesthetic reasons, such as the one Abigail wears, since the damage can extend to the total destruction of the nasal pyramid. Such a stigma demanded an answer, that of covering the orifice with reconstructive rhinoplasty.

In India, as early as 500 BCE, a technique had been developed to repair the nasal pyramids amputated from thieves or enemies. It consisted of constructing a frontal flap. Later, in the sixteenth century, Gaspare Tagliacozzi described a flap that was taken from the skin of the arm (nasobrachial) and sutured to the nasal stump, maintaining a bridge with the arm, which provided nutrients and was not cut until the flap had taken root. It is this latest technique Thackery employs on the nasal reconstruction of his former lover. It is possible that he chose this technique to avoid an obvious scar on the forehead of a beautiful woman such as Abigail. In the nineteenth century, the German surgeon Karl Ferdinand von Graefe recovered this technique and modified it, earning the title of the father of modern plastic surgery.

Inguinal hernia

The repair of defects in the abdominal wall has been a surgical procedure that has raised interest since Antiquity. Papyri from Pharaonic Egypt described the first technique for curing an inguinal hernia, consisting of bilateral castration. Without being so radical, over the years the use of trusses were recommended as a method of conservation to avoid surgery on the hernia, which was blighted by significant infection rates and the failure of the procedure (relapse). Once again, it was not until the nineteenth century that significant advances were announced.

Edwards develops a procedure in his clandestine clinic to correct this pathology, which was the true work of the Italian Edoardo Bassini, based on strengthening the posterior plane of the inguinal canal, with a low incidence of infection and relapse. A single case of early relapse resulting in death takes place in the third episode, “The Busy Flea”, due to the patient not having
avoided physically strenuous activity as the doctor ordered. This encouraging result is what Edwards reveals to Thackery in the sixth episode, “Start Calling Me Dad”, when Thackery discovers him in the basement. So a working relationship begins prompted by the interest he sparks. The technique is revealed in a meeting of the Metropolitan Surgical Society in the eighth episode, “Working Late a Lot”. Halsted (once again) proposes a certain modification concerning Bassini’s reconstruction of the internal ring, which must be as snug as possible, and he argues: “...If we could artificially produce tissues of the density and toughness of the fascia and tendon, the secret of radical cure of hernia can be discovered.” Irving L. Lichtenstein took this idea and in 1986 created a “hernioplasty free of tension”, where a polypropylene mesh is implanted on the anterior face of the internal oblique muscle and on the inguinal ligament, confirming its technical simplicity, early discharges and a lower incidence of relapse. Currently, hernias can be repaired using a laparoscope.

This type of surgery constitutes one of the most frequent operations a surgeon must undertake, and in all hospitals classic techniques such as Bassini’s and Lichtenstein’s are employed.

**Appendicitis**

The fourth episode, “Where’s the Dignity?”, makes reference to the difficulty of locating the cecal appendix and consequently performing an appendectomy or extirpation of the appendix, a procedure, viewers are assured, that nobody has survived to date. To our eyes this fact may seem curious, since acute appendicitis is the main cause of acute or surgical abdomen nowadays, and therefore, a relatively common procedure.

We have to go back to the sixteenth century to find the first description of the cecal appendix, given by Giacomo Berengaria of Carpi, and shortly afterwards the description of its inflammation during an autopsy. The first extirpation was conducted in the eighteenth century by Amyand, who removed an inflamed appendix located in an inguinal hernial sack (nowadays the infrequent situation of an acute appendicitis contained in the hernial sack is known by the eponym of Amyand’s hernia). Later, appendicular inflammation was known by the name of perityphlitis, and it was not until 1886 that Fitz, a professor of pathological anatomy, recommended appendicular removal in the case of inflammation after analyzing the post-mortem results of 257 patients suffering from this affliction.

The first extirpation is attributed to Thomas Morton, but we would have to wait for the arrival of McBurney, in 1888, who would go down in posterity as being the first surgeon to describe the clinical manifestations of such a popular pathology prior to its perforation, as well as the point of maximum abdominal hypersensitivity and the incision that bears his name, which is the one employed today when it is carried out as an open procedure, radically contributing to decreasing mortality, from 27% around 1900 to 0.6% today. In episode seven, “Get the Rope”, Thackery gets into McBurney’s skin: “By drawing a line and divining the midway point between the anterior-superior iliac spine and the umbilicus, parallel to the fibers of the external oblique, no matter what the size or sex of the patient... you will always find the appendix.” Christensen, who is assisting him in surgery, adds: “The Thackery Point never misses”, in clear allusion to McBurney’s point. If we had to halt our arrogant protagonist with a “but”, it would be to point out that the most precise location for making the incision is on the line described, but two thirds of the way from the belly button, not at its mid-point.

**Cocaine: between anesthetic and addiction**

In parallel to the development of surgery, for thousands of years humankind has experimented with substances for anesthetic and analgesic purposes, never quite achieving an optimum result, making surgery a bloody and painful procedure. Not until the early nineteenth century would the time be right for the progress of anesthetics, provided by the development of sciences such as physiology, physics and biology, as well as surgeons’ greater sensitivity to their patients’ suffering.
By 1831, three anesthetic agents were known and employed via inhalation: nitrous oxide, ether and chloroform.

The first to apply nitrous oxide for anesthetic purposes was a dentist named Horace Wells, who inhaled the gas and extracted a tooth without feeling pain. However, a later exhibition before his colleagues resulted in failure, since the patient began to scream and he was branded a fraud. One of his disciples, Morton, experimented with ether both on animals and on himself, achieving a loss of consciousness through inhalation. So in 1846, the first surgical operation without pain (the extirpation of an injury of a vascular nature located in the neck) was successfully carried out by Dr. Warren, thanks to Morton's ether. A year later, Simpson, in England, self-experimented with chloroform with similar results, extending its use in Europe, while in the US, ether was preferred, which is the gas used in the series.

John Snow, from Edinburgh, was responsible for the development of anesthetic as a specialization when he successfully administered chloroform to Queen Victoria to ease her pain while giving birth to Leopold. Until then, it was customary that the narcosis was administrated by the least expert member of the medical team. In fact, in the series, it is often controlled by the nurses.

In 1844, a needle for injecting fluids was designed. A decade later, Wood sought for a way to alleviate the pain caused by the neuralgia his wife suffered by injecting morphine. However, though morphine was not successful as an anesthetic, it was as an analgesic.

Cocaine is the alkaloid extracted from coca leaves. It was in 1884 when Koller applied it for the first time topically onto his cornea, achieving anesthesia. Its use was soon extended to fields such as urology and gynecology. Halsted and Hall managed a wide range of truncular blocks through injecting cocaine. The practical demonstrations were conducted on patients and even experimenting on themselves, which brought tragic consequences due to cocaine's highly addictive power, causing alterations in their social and professional behavior.

James Leonard Corning (1855–1923) and Karl Augustus Gustav Bier (1861–1949) were pioneers in spinal anesthesia via medullary cocainization. The latter also experimented on himself, and described the typical post-dural puncture headache due to the loss of spinal fluid during the anesthetic tap. This type of tap is given in the first episode of The Knick, when a patient, Mr. Gentile, previously operated on for secondary intestinal perforation of a polytrauma, presents septic shock due to the failure of the suture made, requiring a further surgical operation. As the patient presents a respiratory infection, general anesthesia by inhalation is not recommendable, so Thackery opts for a spinal block.

At this point, it is obvious that Thackery is addicted to cocaine, as has been evident from the first episode. Cocaine, the natural alkaloid extracted from coca leaves that was isolated for the first time in 1859, has among the most powerful stimulating effects on the central nervous system known, the devastating effects of which are now well-known today.

Initially, it was successfully commercialized as a remedy for specific common diseases: the flu, colds, toothache, etc. In this way, Mariani wine, with a cocaine base, was bottled and sold without problems. Among this wine's great defenders and consumers were Edison and Pope Leo XIII. A glass of this wine could contain between 35 and 70 milligrams of cocaine, the same as a line of cocaine. Coca cigarettes were also sold for throat afflictions, and drinks with cocaine and alcohol, such as the well-known Coca-Cola, for headaches, melancholy and hysteria (as can be appreciated in the ninth episode, “The Golden Lotus”). It was in 1909 when cocaine was substituted by caffeine in Coca-Cola's formula.

Such was the furore unleashed by cocaine that even Sigmund Freud began to study its use for treating neurasthenia, leading to an essay entitled Über Coca, in which he expounded its virtues for the cure even of alcoholism and opiate addiction. Only one German naturalist compared cocaine's secondary effects to opium, but until the second half of the twentieth century, cocaine was not classified as a narcotic substance.

Cocaine acts by exciting the cerebral cortex and producing a state of euphoria, which increases wakefulness and physical performance
because it decreases one's feeling of tiredness. So Thackery employs it to avoid fatigue during his long sessions of study and surgery. Habitual consumption does not create physical dependence, but definitely psychological dependence. Periods of abstinence are not common, though not impossible.

So we can conclude that Thackery's inclination to consume cocaine is a response to three factors: firstly, its ubiquity in society of the time (at the start of the ninth episode there appears on screen, "In 1900, cocaine was regularly sold in pharmacies –no prescription needed", so easy was it to purchase); secondly, a lack of any awareness of its negative effects combined with the improved performance needed for his work; and thirdly, self-experimentation with the drug on his own body.

Racism in the hospital institution

Despite slavery being eliminated in the United States in 1865, racial segregation continued to be imposed in an unofficial yet real sense throughout the nineteenth and until the mid-twentieth century. In cities such as New York, black people were confined to specific neighborhoods, and could not live in affluent districts. Likewise, in the working sphere, black people were relegated to less-qualified positions, given that in most cases, they could not access university education. In the series, it is clear that there were hospitals for whites and for blacks. Dr. Edwards joins the Knick through the mediation of its patrons, the Robertsons, without having previously demonstrated his worth, albeit insofar as Dr. Thackery has not allowed him to. Taking a black doctor onto the hospital staff also meant many patients refusing to be treated by him, losing customers, and thereby lowering the income of the debt-ridden hospital. Faced with this situation, in the hospital basement, Edwards attends several medical cases of black patients, creating a clandestine hospital where not only does he undertake surgical procedures but also research, managing to perfect a surgical vacuum without the need to operate it using a crank handle. Likewise, the situation leads him to employ unqualified staff, such as a hospital washerwoman to act as a surgical nurse.

It is in the seventh episode, "Get the Rope", when the cruelty with which black people are treated is brought to the fore. The conflict is served with the death of a white patient who has been attacked by a black man for having treated the latter's wife as a prostitute. Exhorted by the family of the deceased, the white community blames the black woman for events and a veritable revolt erupts in the city.

Epidemiology and typhoid fever

Ongoing mention is made through the episodes of a typhoid fever epidemic affecting some of New York's population of a higher social standing. This disease is caused by a bacteria called Salmonella typhi, whose bacilli are evacuated through the feces of asymptomatic carriers. They are disseminated through inadequate hygiene, thereby entering the water supply and foodstuffs, as occurs in the series. The pathogens enter the organism through the gastrointestinal tract, reach the bloodstream through the lymph vessels and cause inflammation of the lower part of the small intestine. All this generates fever, prostration and abdominal pain which can sometimes be due to an intestinal perforation, as happens with Cora Hemming in the third episode, where she requires surgery to repair it.

The investigative activities of Jacob Speight, an inspector from the Health Department, and Cornelia Robertson, following the epidemiological clues left by the typhoid fever, lead to the asymptomatic carrier: Mary Mallon, a cook who spreads the disease (even though she does not suffer from it) through her peach Melba. So it makes those who eat it sick. We have three elements here –the agent, host and environment– that comprise the epidemiological model current in the period that fitted the explanation of genesis of diseases in contrast to the simplicity that reigned in the eighteenth century, which explained the disease as the effect of a specific agent in an erroneous unicausal model.

This study of the distribution and determiners of health-related states or events in specific pop-
ulations, and its application in controlling health problems, is what we currently call epidemiology. This does not merely provide a causal explanation of the disease and its distribution, but also emphasizes its prevention, among other, more complex objectives.

Diagnostic instruments

X-rays

The German researcher, Röntgen, discovered this form of radiation by chance in 1895, when he detected a certain luminescence while he was handling vacuum tubes. He believed this was a form of previously undiscovered radiation, which he called x-rays because of their unknown nature, comparing them to an unresolved equation. Before presenting this discovery to the scientific community, he conducted several experiments, exposing different objects to this new radiation, among them a woman’s hand, which constituted the first human x-ray.

X-rays are a type of ionizing electromagnetic radiation to which continued exposure can be dangerous, although, as is well-known, they have a wide application in medicine. Naturally, x-rays signified a revolution in medical diagnosis, and later, the science of radiation therapy was developed.

Röntgen was awarded the Nobel Prize for Physics in 1901 for this discovery, but declined to patent it despite Edison suggesting this course, saying he was bequeathing his discovery for humanity’s benefit.

Nevertheless, Edison can be attributed with manufacturing the first commercially available fluoroscope, shown in the fifth episode, “They Capture the Heat”, in which the device is presented to the doctors and manager of the hospital.

Another innovation that came from the inexhaustible Edison was the roller phonograph, an invention with no medical applications, but which Captain Robertson shows off in a party at his home, recording his own voice and playing it back later to the delight of his guests in the fourth episode, “Where’s the Dignity?”

Zinberg and the intrascope

We have to wait until the eighth episode, “Working Late a Lot”, to discover Dr. Levi Zinberg’s luminous intrascope, the objective of which was to access the body’s different cavities with the least invasiveness possible.

This gadget was known about in 1805, invented by Bozzini, who used a candle as a light source. But the invention passed unnoticed until in 1853, Desormeaux rescued it from oblivion. Thirty years later, Nitze perfected it, though it was still a rigid instrument, which caused patients a lot of inconvenience. In this manner one could view a bladder through the urethral channel without the need for open surgery.

The instrument was refined little by little throughout the twentieth century until it became the flexible endoscope, which enabled doctors to view the stomach. The next step was the appearance of the fiberscope, made of a fiber-optic bundle that allowed the transmission of light even if the end is curved, and to receive images, which was extremely useful for diagnosis, taking biopsies and conducting specific simple surgical procedures. The following step was miniaturizing the system.

Conclusions

Stanley B. Burns, a New York ophthalmological surgeon, was always interested in history, and in 1975 he began to collect old photographs on medical subjects. His collection now constitutes the Burns Archive, one of the most significant private holdings of old images in the United States, with over one million historical photographs. Midway between a circus show, due to the striking nature of some of the images, and graphic documentation of diagnostic means and treatments of the period, it enables us to delve into the darker side of life in the nineteenth and early twentieth centuries. It has therefore been a source of documentation on many occasions for film-makers, artists, editors, and so on, revealing a heroic age in medicine.

In The Knick, Soderbergh uses Burns’ consultation, both personally, via collaboration on
the TV sets, and through the contribution of this graphic collection. Furthermore, he possesses a collection that covers all the articles published between 1880 and 1930 of magazines such as Annals of Surgery and Archives of Surgery, documenting both the huge successes of the surgeons of the period, and their failures. So the first time filming took place in the operating theater, he had to reorder the staff sitting on the benches as was done of old: in the first row sat the old and distinguished doctors, and in the next sat the associate professors, assistants, etc. Another curious fact is that Burns had to teach the actors how to correctly hold the different surgical instruments such as the needle drivers, perform different suture types, and so on. Among other things, Burns has a photo that shows a device that was employed to cool a person's head, dating from approximately 1890. This consisted of a sort of cape surrounded by a rubber tube that acted as a type of coil, through which cold water was circulated. Thanks to this, the sixth episode, “Start Calling Me Dad”, shows this device for cooling a patient's head used on little Lillian, who has meningitis. Furthermore, during the case of the theft of a medical item in the series, in the second episode, a photograph belonging to Burns’ collection can be seen.

Director Steven Soderbergh’s manner of displaying all this could be described as hard and grim, comparing surgery to something akin to a butcher’s shop, through fairly explicit images. However, one should bear in mind the difficult times, for both doctors and patients, in which the action develops, when such advances as we now take for granted did not exist. One should be aware of the need to experiment for surgery to evolve, sometimes on the experimenters’ own flesh, at others on patients, and often on animals, generally dogs. These were not easy times, and they should be paid due merit.

Even if it is true that the various discoveries occurring throughout the series are real, we cannot say that the date on which these events took place is likewise true. However, we understand that this is a resource of the scriptwriters, Jack Amiel and Michael Begler. Not only does it give the series greater entertainment value, but it portrays the importance that this period had in order for surgery to advance to its current state of the art—a state in which we now have far more confidence than back then.
The Sopranos and Psychoanalysis

Oriol Estrada Rangil

For many, this program is the pioneer of television’s so-called “third golden age” (the first, heralded in by The Twilight Zone in the sixties while the second, by Hill Street Blues and St. Elsewhere, among others, in the eighties). In 1999, the inner turmoil of a New Jersey mafia boss launched a new epoch in television fiction, one which catapulted the cable chain HBO up to the highest standards of quality. Its six seasons, which ended in 2007 with five Golden Globes and 21 Emmys, also showered well-deserved recognition on the career spanning more than 30 years of its creator, David Chase.

Tony Soprano is nervous. He does not know where to sit when he enters the psychiatrist’s office. “I shouldn’t be here”, he has written all over his face. It all began during a family barbecue when he fainted in front of his two families (his blood relations and his in-laws). The diagnosis: a panic attack. His doctor and neighbor suggested he visit a psychiatrist, Dr. Melfi, who also conducts psychoanalysis.

Despite fainting episodes being highly unusual in panic attacks, we have to concede to the creators of The Sopranos that it is probably one of the TV series that has best portrayed modern psychoanalysis. Proof of this is recognition by the American Psychoanalytic Association, which awarded a prize to Lorraine Bracco, the actress who plays Tony’s therapist, for having portrayed the most credible psychoanalyst appearing on film or television. The truth is, until then the image of the psychoanalyst had barely changed from what it was in the early twentieth century: a Sigmund Freud type smoking a pipe while a (hysterical) patient reclines on a divan, raving incessantly. Directors such as Woody Allen have not strayed very far from that more classical idea when portraying psychoanalysis on the big screen. So it is understandable that her “pop psychoanalyst” image was so out of step with the broader public (and despite her character, it remains so).

Dr. Melfi in The Sopranos puts things into perspective and shows us how this therapy has evolved. While psychologists in general have been adopting new techniques and even abandoned psychoanalysis as a valid method, for several years many psychiatrists have combined psychoanalysis with pharmacological treatments, treating the patient in quite a different way to their founding father’s approach. For example, they push aside the divan and prefer to look their patient in the eyes, actively participating in the discussion.

In Dr. Melfi’s psychiatrist’s office we see the famous divan, but Tony will not lie on it. Nor will he begin to make associations of ideas while his therapist nods occasionally (or –that recurring gag– awaking with a start when the patient recalls their attention). In fact, one of the main problems with the psychiatric process is that Mr. Soprano is a difficult patient who does not want to speak, one of those who thinks he is constantly wasting time. An added difficulty is that, if anyone in his mafia environment finds out he is seeing a “shrink” (even worse, a “lady shrink”), it could be the end of his career as future capo of the New Jersey mafia. Tony is a challenge, but Melfi will insist; while she risks her professional pride, he may be risking his life.

One of the aims of any psychological therapy, above all psychoanalysis, is to get to the root of
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the problem, so it is worth recapping history and going back to late-nineteenth-century Vienna, to the celebrated neurologist Sigmund Freud's consulting room, to understand what psychoanalysis is based on and what it aims to do. Freud defined the three aspects that comprise it as a discipline: it is a theoretical and explanatory model of emotions; it is a research method; and, lastly, it is a form of therapy. As a theory, Freud postulated that the pillars of psychoanalysis have a great deal to do with sexuality, stressing the well-known Oedipus complex, but also repression, resistance and the unconscious. In fact, some of the greatest criticisms, even schisms within psychoanalysis are due precisely to that excess of emphasis on the sexual question, which more than once Tony Soprano will hold up for comparison in his sessions.

But there is a theoretical model of the human psyche that did have a big impact, one crucial for understanding Freudian theory, and the case before us, the dilemmas and problems that wrack Tony. This is the psychological structure formed of the ego, the superego and the id, which act on three different levels: the conscious, the preconscious and the unconscious. A common metaphor that explains it more simply is the iceberg. The largest part is hidden underwater, corresponding to the unconscious and the preconscious, the latter sitting above the former. Only a small tip, the conscious, pokes above the surface. Meanwhile that iceberg is divided into three parts with different functions. On one side we have the id, completely submerged underwater, which is our most primitive, innate, undomesticated side, which exists to try and satiate our most basic desires, the so-called drives: hunger, sex or aggression. Then we have the superego, which is the largest part of the iceberg and is therefore almost completely submerged, though its head remains above water. The superego represents the moral and ethical thought that reaches us through our culture, and which is in constant struggle against the id, like a sort of moral guardian. Finally, we have the ego, which resembles an intermediary between the real world, the demands of the id and the superego. It is perhaps most similar to our self-awareness, our visible face. It would mainly inhabit the tip of the iceberg, but not completely. The ego is the part of us that must balance the id's insatiable drives and the superego's morality, and it is where internal conflicts arise that lead one to seek consultation with a psychoanalyst.

To understand it better, we can return to Tony Soprano. We can see that his problems come precisely from that internal struggle between the different factions of his psyche. While in reality they do not appear outside his mind, we accept that in the series they become visible to viewers. His mafia side, that unscrupulous Tony, who is violent, promiscuous and a killer, that character with whom we cannot easily empathize, is the manifestation of the id, an uncontrolled id that neither his ego nor superego are capable of reigning in. But then we have that other Tony, who is sympathetic, who sometimes truly loves his wife, who worries about his kids and wants to protect them from that world dominated by the id. That is where we see this character's ego, the story of a man who looks after his own and leads an apparently normal life. Yet his superego is there to remind him that how he earns his living is not good. That is when the internal conflict arises, causing those panic attacks. Naturally, such conflicts are fought on the unconscious plane, the demesne of psychoanalysis and psychoanalytic techniques, which try to get all those submerged issues to rise to the surface.

On Sigmund Freud's divan, the subject would lie back without seeing the therapist so as not to feel observed, and begin speaking barely without interruption or restrictions of any kind. It is what is known as “free association of ideas”. This is the principal psychoanalytic technique to encourage the patient to talk about anything entering their head, whether images, feelings, ideas, memories, etc. Sometimes, the therapist might suggest a topic to the patient, or encourage them to focus on their dreams, but in general they try not to suggest anything and topics arise spontaneously. Freud believed that this was the best way of reaching the id, the unconscious, and the freer the associations, the better the results would be. As mentioned, Dr. Melfi in The Sopranos is not a traditional psychoanalyst. In fact, probably few therapists still use free association of ideas in the
purest sense. Yet traces remain in her approach, and we often see her intervene in response to one of Tony’s comments in order to keep unraveling a thread, trying to follow the associations almost without realizing it. And had she not taken more of an active role, they probably would not have gone beyond a first session, in which the mafioso wonders where the strong and silent Gary Cooper types have gone. Historically, before arriving at free association of ideas, psychoanalysts used rather more complicated methods that, nowadays, are seen as quite unscientific. I am referring above all to hypnosis and the cathartic method, both of which were discarded once free association of ideas began to be used, since it was thought that the other methods were unable to break down the barriers of the unconscious. Nevertheless, within the concept of catharsis lies one of the theoretical and therapeutic pillars of psychoanalysis: the idea that to cure a patient one has to recall that traumatic moment that caused the discomfort, which that person has repressed and forgotten. This is an idea which fiction has used often to create a final climax, such as in Hitchcock’s *Marnie*, a film in which psychoanalysis is likewise heavily present.

But if there is any place where our unconscious moves with as free a rein as most New Jersey gangsters, it is in the world of dreams. Dreams were one of the resources that the scriptwriters of *The Sopranos* used to get directly inside Tony’s head, though they do not always make clear what each of the elements appearing signify. Why is it snowing? Why can we hear that constant creaking? What is Junior doing in that window? Why does he kill one of his most productive workers? Not even Tony has an explanation for the latter, so he asks Dr. Melfi: “Why would I do something like that?” According to Freud, dreams represent the realization of our desires, yet it is not so simple. Despite being asleep, our conscious is still awake, and is not willing to accept certain drives that come from the id. So the unconscious must camouflage such desires in some way in order to overcome our censorship, thereby utilizing the terrain of metaphor and symbolism.

The idea that dreams send us “camouflaged messages” has been used for many years to sell us famous books on dream interpretation and, even if the content in most of these modern books is highly doubtful, it was Freud himself who in 1900 published a manual explicitly entitled *The Interpretation of Dreams* (*Die Traumdeutung*). As mentioned, the sexual question was one of the pillars (not to say obsessions) in Freud’s theories, and it seems he had a tendency to interpret many dreams from a festive or erotic viewpoint. However, the creators of *The Sopranos* were clear that, nowadays, not everything can be linked to sex. In the pilot episode, Tony explains one of his dreams, where he undoes a screw and his penis falls off. He goes, penis in hand, to visit the mechanic to get it put back in place, but a bird takes it and disappears. Beyond the supposedly clear sexual connection, the focus of attention is centered on that bird and what it came to symbolize in that episode. It is a moment of revelation (or call it a catharsis) when Tony becomes aware, among sobs, that one of his main problems is the fear of losing his family (as he lost the ducks that appeared at the beginning). So the episode closes, in a similar way to how Freud believed cases were closed, when the patient is able to discover what his or her problem is. And in the same manner as today’s psychology believes that discovering the problem is simply the first step and then one must work on it, this is where the series truly starts.

In the first season, a moment arrives when Tony’s mother finds out he is seeing a psychiatrist. Her first reaction, tremendously egocentric, but not necessarily erroneous, is to think that Tony is going to the psychiatrist to talk about her, to complain about his mother. This scene perfectly illustrates some of the clichés about psychoanalysis in which the wider public believe: If someone visits a mental health professional it is because when young they had problems with their mother. Once more, although psychology in general has gone substantially further than Freud, the influence he had on popular culture remains strong and retains its hold in the collective imagination. Part of the blame lies with one of his most famous (and most parodied) theories, although some of the merit should go to Greek mythology itself: the Oedipus complex was described for
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The first time in his aforementioned manual *The Interpretation of Dreams*. Yet before discussing it, we should recap Freud’s own theory on childhood sexual development, since he believed that right from birth children seek to satisfy their libido using different parts of their bodies. He divided the process into five stages: the oral, anal, phallic, latent and genital. It is the phallic stage (from three to six years old) when the so-called Oedipus complex develops, which is defined as the presence of feelings of hate and love towards the progenitors simultaneously. There can be two aspects: a positive Oedipus complex, in which the child feels hatred towards the progenitor of the same sex, and sexual attraction toward the opposite sex, and a negative complex, which is logically the inverse. In the phallic stage it is the male sexual organ that focuses the boy’s interest, and it seems that, in the case of girls, the clitoris is also equivalent to a phallus. In this phase, the boy will feel sexual desire toward his mother, and thus supposed hatred for his father (the Oedipal tragedy), but by identifying with her and realizing that girls do not have penises, the only explanation that occurs to him is that women have been castrated. This fear of suffering the same fate leads him to abandon his incestuous desires and identify with the father (according to Freud, this is the logical path to follow). In the case of girls, they abandon their desire for their mother on believing that she is guilty of their castration (through her they realize that their clitoris will not grow like a penis), and from that fact, so-called “penis envy” arises, which will help them identify with their mother again, since she has access to one, the girl’s father’s (this is known as the Electra complex, which Freud’s old colleague, Carl Jung, defined).

And if ever there were a tempestuous story between mother and son on television, few could beat that of Livia and her son Tony Soprano. Their relationship cannot be considered a clear example of the Oedipus complex, but no doubt it contains elements of the above. Firstly, Tony’s feelings toward his mother are difficult to explain, since she is a sort of bitter ogre who since his childhood has maltreated her child (and some of the toughest scenes of that childhood are based on the mother of the series creator, David Chase). Nevertheless, whether due to that Italian cultural heritage of the Mamma figure, or because that childhood desire postulated by Freud has not been fully overcome, Tony continues to worry about her and set her on a pedestal. He complains that it is his wife who refuses to bring her to live with them, which is supposedly what a good son should do. In fact, after talking about how complicated his mother is, he goes to visit her with a bunch of flowers. Some of the most heated lines in Melfi’s office specifically concern questions relating to his mother and his incapacity to recognize that, as well as love, he also feels hatred toward her. Those who do seem to have taken these negative feelings toward his mother on board are Tony’s sisters. Freud would explain such a rejection as them blaming his mother for their “castration”. In this case, they would not have overcome the complex or moved on to identify with their mother. Bearing in mind Tony’s older sister’s mental instability, it is clear that some trauma remains unresolved.

The figure of the father, Johnny Soprano, is also worthy of analysis. Tony’s identification with him is clear. During the series we see flashbacks of the relationship Tony establishes with him, midway between fear and admiration. From the psychoanalytic perspective, it is obvious that a significant problem exists in this relationship. Overcoming the Oedipus complex is considered necessary for the psyche’s healthy functioning. It is supposedly at that moment when the superego is born—the moral force that declares incest is not good and boys should identify with the father, focusing on him. As mentioned, that is exactly what Tony does, but the problem lies in that his father is the root and symbol of all his current anguish. His father represents all those values, all those attitudes that now clash with the ego and superego. Added to all this is the figure of Corrado, Tony’s uncle, who, in Melfi’s office, takes on a paternal role for him even before his father’s death: When Dr. Melfi asks him for memories of his father, one of the first that comes to mind is playing baseball with his uncle, not his progenitor. And is their relationship not tempestuous? Assassination attempts, subterfuge to win power...
Another straw on the camel’s back of Tony Soprano’s Oedipal family drama.

Another interesting love story occurs in Melfi’s office itself, from the first season, even from the pilot episode. Our protagonist shows signs of having noticed this psychiatrist and psychoanalyst of Italian heritage (“My mother would have loved it if you and I got together”). Dreams come into play again. He dreams of Melfi in bed, in the shower, and finally tries to kiss her in the psychiatrist’s office. He ends up making a confession: “I love you. I’m in love with you. I’m sorry... I dream about you. ... I think about you all the time.” To which she responds: “I know this may be very hard for you to swallow, but you’re only feeling this way because we’ve made such progress... I’ve been a broad, generic sympathetic woman to you, because that’s what this work calls for. You’ve made me all of the things you feel are missing in your wife... and in your mother.” Tony insists: “You’re makin’ me out to be some mama’s boy. I’m a man... and you’re a woman. End of story. And this crap about Freud and every boy wanting to have sex with his mother... that’s not gonna fly here. ... You don’t want me to come back any more, fine.” But Melfi assures him it is quite the opposite, that his confession is a byproduct of his progress. Beyond the comment on the Oedipus complex, and even beyond the lack of female affection that Tony seems to feel, this falling in love is the perfect excuse to speak of some of the phenomena associated with psychoanalytic therapy, in this specific case, transference.

Psychoanalytic therapy is a long process. It can last years. So a personal relationship is established with the therapist, somebody with whom profound, intense experiences and feelings are shared. In fact, psychoanalysts consider that in any relationship, one attributes libido to the other person, though they hasten to add that the term “libido” should not be interpreted sexually. In fact, they consider it necessary for the therapy to progress, since it is primordial that the patient trusts their therapist. From their side, the therapist must maintain an impassive, distant stance (whenever possible). And it is precisely that distance, the sparse information the patient has about their therapist, that facilitates the transference process. According to modern psychoanalysts, the patient is transferring onto their therapist such feelings and experiences as they recall, of which they speak, and addressing that empty “vessel” which is their psychoanalyst, sometimes identifying them with their mother or father. The patient has not fallen in love with the therapist. The patient does not necessarily feel that their therapist substitutes their father or mother. The therapist is simply there at a moment when feelings arise, and therefore the therapist is the figure the patient addresses. As Dr. Melfi correctly states, this means the therapy is progressing. Tony has progressed in terms of the trust he has in her, so his feelings and lack of affection also begin to come to the fore. Caution is required, however, since the psychoanalyst must be capable of recognizing that transference (although for this psychoanalyst it was easy), and stopping it from going further. Will she manage this? I reveal no spoilers here.

Not everyone has praised Dr. Melfi: Some therapists have raised their hands in horror at certain details she reveals to Tony about her personal life, or for letting her control slip at times and losing that distance and impassiveness she should maintain. Yet others have seen in all this a reflection of the therapist’s true reality, making Dr. Melfi much more believable and plausible than if the series had portrayed a textbook therapist. Psychoanalysts are not perfect, and neither is psychoanalysis. While it is probably the therapeutic technique/philosophical perspective on the human psyche best-known worldwide, it is also one of the most criticized. Currently, it does not even form part of the mandatory or core content of academic programs in Spanish psychology faculties. Psychoanalysis was rejected by many psychologists and psychiatrists decades ago (in fact, Freud himself experienced colleagues such as Jung disown some of his theories), and one of the main reasons is eminently practical. Psychoanalysis requires the patient to attend the consultancy for a long period of his or her life, years even, and that was considered inefficient. Neither was it ethical, since the patient’s financial commitment was enormous.
Nevertheless, some critics would blame the decline in psychoanalysis in the late fifties and early sixties on drugs. In this, they are not referring exclusively to hallucinogenic drugs which “expanded one’s mind” in another direction (remember that Freud felt a certain attachment to cocaine), but to advances in pharmacological therapy. Here, the supposed benefit was almost instantaneous, making it unnecessary to spend months in therapy to begin noticing improvement. In fact, advances regarding the neurological origins of certain psychopathologies led psychology more toward the pill than the divan. In that period many of Freud’s theories were also discredited, and often his own patients’ cases, the ones leading him to formulate his theories, were questioned. Accusations of having forced memories out of his patients or interpreting what they told him in his own interest are criticisms that Freud and psychoanalysis have weathered since the start.

But despite everything, progress in this science, specifically neurobiology, seems to prove Freud partially right. Perhaps not in the interpretation and reasoning of some of his theories, but definitely in terms of certain basic ideas that psychoanalysis proposed in its time, especially regarding unconscious processes. So it is time to bring psychoanalysis up to date, in Dr. Melfi’s office, one that has no divan, and to discover psychoanalytical psychotherapy. Some of the practitioners of this new discipline, while recognizing that the origins and much of the method still owe a great deal to Freud, consider that current psychoanalysis is as different from the original as modern physics is to Newtonian physics. Remember that in its early days, the patient had no visual contact with the therapist, and the latter barely intervened in the discourse, except at specific moments to guide the patient a little. Moreover, from that moment on, the psychoanalyst was the maximum authority: he, rather than the patient, decided what was important or not. The current approach considers that the therapeutic work is done together. It is a process that occurs by listening one to the other, both what the patient and the therapist have to say. The patient’s subjective reality is now relevant, so both parties work more on how she or he sees the world, not how the psychoanalyst believes things should be (that is why Melfi is constantly asking Tony what his dreams mean to him, what his feelings are). Psychoanalytical psychotherapy keeps seeking those unconscious processes that affect the patient’s life without the latter realizing, but is no longer exclusively related to neuroses or phobias, but can tackle the mental problems of our age (anxiety, depression, eating disorders, etc.). It is perhaps shallower work, therefore requiring fewer sessions, on problems that may be less specific. Nevertheless, the divan remains and, should the patient so require, they can delve deeper into their psyche.

The Sopranos is considered one of the best TV series of our times, one of the pioneers that wanted to take its format beyond that of a pure consumer product for filling television schedules. It was a series that was carefully produced in every detail, one with artistic pretensions. The care its creator took to create something special can be seen not merely in its manner of approaching its protagonist’s psychological therapy, which earned it the recognition of psychoanalysis professionals. One can truly say that the scriptwriters put in great effort, since four out of five of the main scriptwriters had undergone psychoanalysis. Many of the series viewers were simply interested in stories about gangsters, so perhaps they did not understand that the main story its creators wanted to tell was of Tony Soprano, his family and his therapy. However, when one analyzes the series from a more psychological viewpoint, one discovers many things that perhaps went unnoticed among so many beatings and killings. In the end, the part of the iceberg we can actually see is the smallest part.
The Big Bang Theory and Asperger’s Syndrome

Ramon Cererols

It is a mass phenomenon. Since its launch in 2007, this CBS comedy has not stopped winning fans and is now first among the most-viewed television fictions in the US, having nearly 20 million viewers in its eighth season. This sitcom starring two Caltech (California Institute of Technology) physicists, which makes constant references to physics’ most complex theories and principles, has garnered extraordinary success, thanks above all to its lead role. The character of Sheldon Cooper, who displays many of the characteristics associated with Asperger’s syndrome, has earned the actor Jim Parsons no less than four Emmy Awards.

In the field of scientific progress it is not unusual to find cases where two or more researchers make the same discovery independently and almost simultaneously, sometimes without either knowing about the other’s work. Among the best-known cases are those of Charles Darwin and Alfred Russel Wallace (biological evolution by natural selection), Isaac Newton and Gottfried Wilhelm Leibniz (infinitesimal calculus), and Elisha Gray and Alexander Graham Bell (the telephone). This fact shows that any great leap in the progress of science is due not just to a lucid mind and great dedication, but also to the prior advances of many people who create a cultural environment that fosters the development of new ideas. Even a figure as renowned as Newton, citing twelfth-century French philosopher Bernardo de Chartres, recognized that “If I have seen further, it is by standing on the shoulders of giants”.

One such concurrent breakthrough occurred in the early 1940s. Its protagonists were the psychiatrist Leo Kanner and the pediatrician Hans Asperger. Though both men were born in what was then the Austro-Hungarian Empire (Asperger, in Vienna in 1906, and Kanner in Klekotow, now Klekovit, a village that belonged to Poland, but is currently in the Ukraine, in 1894), their lives led them on destinies far removed from each other. At thirty years old, Kanner emigrated to the United States, and a few years later was commissioned to create the first children’s psychiatric service in the world at the Johns Hopkins Hospital, in Baltimore.1 Among the many children he treated there, several captured his attention. They displayed common symptoms differing from any other disorder identified to date, and had been classed as mental or schizophrenic weaknesses. They all displayed an incapacity to relate to people in a normal manner, a preference for objects, a language having no communicative purpose, an excellent mechanical memory, monotonous and repetitive behavior, rejection of external intrusions or loud or sudden noises, and fear of change.

Kanner decided to call this syndrome “early infantile autism” because its fundamental or pathognomonic characteristic is the child’s isolation in his own inner world. He borrowed the term “autism” from Swiss psychiatrist Eugen Bleuler, who had coined it in 1911 to define the behavior of schizophrenic adults, withdrawn

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1 Here and below, I use a male gender to refer to both boys and girls. Nevertheless, Asperger’s syndrome is around five times more common in males than in females.
and closed in upon themselves. In 1943, Kanner presented his conclusions, along with a detailed description of eleven case studies, in an article called “Autistic Disturbances of Affective Contact”, which became a classic of clinical psychology.

While Kanner was treating and studying his patients in the US, Asperger was doing the same in his native Vienna, at whose university he gained a doctorate in medicine and specialized in pediatrics. In 1932, he took over the special education section at the university children’s clinic, through which hundreds of children were treated. During the Second World War, he was a medical officer and created a school that was destroyed by shelling, in which he lost a large part of his earlier work. In 1944, he obtained the chair of pediatrics at the University of Vienna, and two years later he was also named director of the children’s hospital at the same university, both positions he would occupy until 1977.

For his qualification thesis to the chair, Asperger focused on a syndrome he had observed in his consulting room in the clinic, one which had grabbed his attention. The children who displayed this syndrome he called “the little teachers” since they were highly knowledgeable on a particular topic, on which they could speak for hours. Despite this, their continuous, exclusive concentration on the subject of their attraction, and their lack of interest in contact with other people made their integration into society and into the standard education system difficult. Even so, Asperger considered that “in some cases, these problems are compensated by a high degree of original thought and experience, which often led them to achieve exceptional successes in adult life”, and was “convinced that autistic people had their place in the organization of social community”.

Asperger presented his work in an article entitled Die Autistischen Psychopathen im Kindesalt-

er (Autistic Psychopathy in Childhood), published in Switzerland in 1944, a year after Kanner’s article. The coincidence in the naming of autism—as “infantile autism” by Kanner and as “autistic psychopathy” by Asperger— is curious, given that as far as we know, neither knew of the other’s studies.* The characteristics described were also similar, even if Asperger emphasized the positive aspects these children displayed, whom he protected in the Aktion T4 program, which aimed to exterminate the Lebensunwertes Leben (“life unworthy of being lived”, according to the term used in Nazi rhetoric).

Precisely because of the geopolitical circumstances of the time, Kanner’s and Asperger’s articles suffered contrasting fortunes. While the former’s was rapidly disseminated, Asperger’s remained unknown outside of certain limited, German-speaking circles. So the name Asperger’s syndrome did not appear in English until 1970, with the translation of a book by Gerhard Bosch originally written in 1962 (Infantile Autism: A Clinical and Phenomenological-Anthropological Investigation Taking Language as the Guide). Yet true international recognition would not arrive until 1981, thanks to British psychiatrist Lorna Wing.

As a result of the birth in 1956 of her daughter Susie, who had autism, Wing focused on studying this disorder, and founded the National Society for Autistic Children in 1962. Her husband, John Wing, likewise a psychiatrist, discovered one of Hans Asperger’s studies from 1946 and translated it for his wife, who became interested in the syndrome, considering it a subcategory of autism. As a result of her research, in 1981, she published the article Asperger Syndrome: A Clinical Account, which in the words of Wing herself “opened the Pandora’s box” to the point where over the next two decades 900 articles were published on this disorder which until then was practically unknown.

* Later, in his book Neurotribes: the Legacy of Autism and the Future of Neurodiversity, Steve Silberman documented the history of autism. He says that Kanner knew of Asperger’s work because one of Asperger’s assistants, Georg Frankl, had emigrated to the US and was working with Kanner. In fact, the observation and study of the first child that Kanner diagnosed with autism (Donald Triplett, who is still alive) was done by Frankl, so it is inevitable that Kann-

er knew of Asperger’s studies.
Two different disorders?

In Wing’s aforementioned article, the author emphasized the common characteristics of the disorders described by Kanner and Asperger, to the extent where she asserted one should ask “whether they are varieties of the same underlying abnormality or are separate entities”. Ten years later, in 1991, Wing came down clearly on the side of the former, proposing the existence of a continuum from Kanner’s autism to Asperger’s syndrome, as clinical cases showed, in which “the same individual was typically autistic in his early years, but made progress and as a teenager showed all characteristics of Asperger’s syndrome”.2

Currently it is thought that this continuum—or spectrum—is even broader, encompassing at one end the most intense cases of autism, Asperger’s in the middle and from there a gradual evolution toward normalcy—otherwise termed “neurotypical”—in which people display certain characteristics on the spectrum to such a slight degree as to be considered simple facets of their personality. In this sense, Wing considers that autistic features are present to a greater or lesser degree in all people.

Official recognition

The standard criteria for the diagnosis of mental disorders are established and updated in two publications: DSM (Diagnostic and Statistical Manual of Mental Disorders, published by the American Psychiatric Association, currently in its 2013 DSM-5 edition) and the ICD (International Statistical Classification of Diseases and Related Health Problems, maintained by the World Health Organization, whose latest edition, ICD-10, came out in 1992). They agree in general, though with certain differences. So, for example, the Asperger’s disorder defined in DSM-IV receives the name Asperger’s syndrome in ICD-10.

Autism—or as it was then called, “infantile autism”—was not considered a specific category until 1978, in ICD-9, and 1980, in DSM-III (respectively 35 and 37 years after Kanner’s original article). Up until that moment it was considered a subgroup of schizophrenia. Fourteen years later, the new editions of both classifications divided autism into different categories (eight in ICD-10 in 1992, and five in DSM-IV in 1994), one of which was Asperger’s syndrome (according to the ICD) or disorder (according to the DSM). It would thereby acquire official recognition for the first time, approximately half a century after publication of Asperger’s original article. This status was maintained for two decades, until in May 2013, after intense polemic, a new edition of the DSM (DSM-5) consolidated the autism group into a single category, autism spectrum disorder, with three levels of seriousness according to the support required. With this decision, Asperger’s no longer has its own identity in the DSM, being subsumed into autism spectrum disorder according to the corresponding level in each case. We must now wait and see what happens with ICD-11, publication of which is scheduled for 2017.

There are five diagnostic criteria listed in DSM-5: A) persistent deficits in social communication and social interaction; B) restricted, repetitive patterns of behavior, interests, or activities; C) symptoms must be present during early childhood development; D) the symptoms cause clinically significant deficiencies in social and occupational areas, or others that are important for current functioning; and E) such alterations are not better explained by an intellectual disability or a retardation in overall development. However, in almost all cases these symptoms are accompanied by other varied manifestations that seem to indicate that the autism spectrum disorder is not confined to a cognitive module, but that it is found in the brain’s general architecture.

Given the widespread use of the DSM for psychiatric diagnosis, the new criteria of DSM-5

The Big Bang Theory and Asperger’s Syndrome

means that patients who until then had been diagnosed with Asperger’s syndrome now have a specific degree of Autism Spectrum Disorder (ASD), or in some cases, no longer fall under diagnosis. Some associations, family members and patients are averse to this change, both for the loss of specificity it implies and the fear that this will signify a decrease in support received, and for the negative connotations the term “autism” bears and loss of a certain mystique surrounding Asperger’s.

Increasing knowledge of the autism spectrum, and improvements in diagnosis, have meant that the numbers of people diagnosed has increased progressively in recent decades. While in 1974, a prevalence of one in every 2500 (0.04%) was estimated, the most recent report from the US Centers for Disease Control and Prevention raises this ratio to one in every 68 (1.5%), 37 times higher.3

Asperger’s in society

Historically, mental disorders bore a social stigma that has waned in recent years, albeit slowly. The Nobel Prizewinner for Economics in 2002, Vernon L. Smith, who has Asperger’s, expresses it thus: “We’ve lost a lot of the barriers that have to do with skin color and with various other characteristics. But there’s still not sufficient recognition of mental diversities. And we don’t all have to think alike to be communal and to live in a productive and satisfying world”.4

The traditional view on mental disorders is that they form an integral part of the person, a totum revolutum that completely disables the person. However, in most cases this is not so. Many great figures in history, art or science have been so, despite –and occasionally thanks to– having problems in some dimension of their mind. The autism spectrum disorder is one of those that most frequently presents significant disparities between one aspect or another of an individual’s mental faculties. So, you might have the case of an individual who is incapable of understanding the double entendre in an expression and yet can construct complex scientific theories. Or one who may not remember a person’s face, but can memorize thousands of digits of the number Pi.

In general, people with Asperger’s operate better in logical and methodical activities, and have difficulties with the ambiguities of social life (such as interpreting ironies and double meaning, intuition of implicit, unspoken social norms, etc.). Or, as the father of one child with Asperger’s commented: “To put it more simply, our son learns social skills with the same difficulty most people learn math, and he learns math with the ease that most people learn social skills”.5

The progressive recognition of the compartmentalizing of mental capacities, manifested, for example, in interest in the “multiple intelligences” proposed by Howard Gardner in 1983, has spurred curiosity in the phenomenon of savant syndrome in society –people who combine deficits in diverse cognitive areas with a capacity far above the normal in a specific field. This curiosity was picked up and emphasized by literature and film, which highlighted the extreme aspects of their natures to give them greater cinematicographic charisma, at the cost of distancing such characters from the more common reality.

The first important milestone came in 1988 with the film Rain Man, winner of four Oscars, in which Dustin Hoffman interpreted an autistic savant. The character is partially inspired by Kim Peek, a person with an exceptional memory, who could remember the contents of 8000 books and a huge amount of data on the most diverse subjects (from a year and a half old he remembered all the books his parents had read to him, and later he was able to read and memorize every

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5 From an article by Brian G. R. Hughes on the Massachusetts Institute of Technology Alumni Association blog, available at: https://alum.mit.edu/news/WhatMatters/Archive/200308
In reality, Peek was not autistic, but born with several brain defects, principally an absence of the corpus callosum (the band of white matter connecting the two hemispheres in the brain).

In 2001, another film also won four Oscars. A Beautiful Mind, based on the 1998 book of the same name, narrates the struggle against paranoid schizophrenia of mathematician John F. Nash Jr., who was awarded the Nobel Prize for Economic Sciences in 1994 for his work on non-cooperative game theory. In real life, Nash was interned five different times—from five to eight months each time—in psychiatric clinics. Even so, using the time between these involuntary commitments he managed to develop important research. Gradually, Nash was able to learn to reject his delirium intellectually, until he reached a level that he himself considered acceptable at about 55 years old. Nevertheless, he regretted that this return to normalcy caused him to lose part of himself. So, in his autobiography for the Nobel Foundation, he wrote: “So at the present time I seem to be thinking rationally again in the style that is characteristic of scientists. However this is not entirely a matter of joy as if someone returned from physical disability to good physical health. One aspect of this is that rationality of thought imposes a limit on a person’s concept of his relation to the cosmos. For example, a non-Zoroastrian could think of Zarathustra as simply a madman who led millions of naive followers to adopt a cult of ritual fire worship. But without his ‘madness’ Zarathustra would necessarily have been only another of the millions or billions of human individuals who have lived and then been forgotten”.

In current society, film has far more media impact than literature. So it is worth highlighting the relative success of the novel The Curious Incident of the Dog in the Night-Time, by Mark Haddon, published in 2003. Its protagonist is Christopher Boone, a fifteen-year-old who investigates the death of his neighbor’s dog. Boone has vast mathematical knowledge, but also difficulties in relating socially. Though the blurb of early editions of the book stated that he had Asperger’s syndrome, the author himself regretted this fact and confessed he knew very little on the subject. His intention was not, he says, to write a book about Asperger’s, but “a novel about difference, about being an outsider, about seeing the world in a surprising and revealing way”. Among communities linked to the disorder, the book received highly varied criticism, from those who consider it an adequate description of Asperger’s to those who believe it offers a false and stereotyped image. It is from that date, both in film and literature, that works began appearing that depict protagonists who are specifically identified with Asperger’s. So in film, we have Mozart and the Whale (2005), Adam (2009), Mary and Max (2009) and My Name Is Khan (2010), while in literature, The Curious Incident’s success was dwarfed by Stieg Larsson’s Millennium trilogy, which has sold more than 70 million books and been made into films. Its co-star, Lisbeth Salander, is a talented IT expert with eidetic memory and social difficulties, characteristics that the other lead, journalist Mikael Blomkvist, associates with Asperger’s.

**And series made their entrance**

During the last quarter-century, TV series have gone from a minor product (second-class film) to overtaking film in the viewer interest they generate. Clearly, the decisive nature of this change is due to a growing presence in the TV sphere of talented directors, scriptwriters and actors, but also because the medium’s characteristics adapt better to the dynamism and connectivity of today’s society. Add to the mix that the advances made by ‘series-phile’ culture coincide time-wise with the recognition and public dissemination of awareness of Asperger’s, then the time is ripe for the growing appearance of series with charac-

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6 As published on his website in July 2009: http://www.markhaddon.com/aspergers-and-autism

7 The Girl with the Dragon Tattoo (Män som hatar kvinnor, 2005), The Girl Who Played with Fire (Flickan som lekte med elden, 2006), and The Girl Who Kicked the Hornets’ Nest (Luftslottet som sprängdes, 2007).
ters having characteristics more or less resembling the disorder, or who adopt certain of its traits.

In real life, there are many cases of people who are difficult to diagnose with certainty, since the border between a mild disorder and a singular personality is blurred. Such a diagnosis is much tougher—generally impossible—in fiction, except for those few productions in which this point is explicitly stated in the script. So it becomes impossible to draw up a definitive list of series with characters having Asperger’s. Those I list in Table 1 are characters from recent series who best fit, fully or in some way, with the definition of the disorder.

The treatment given to the topic of Asperger’s in each of these series varies greatly, and in reality, the focus in many is not even suggested, since the only thing they aim for is not to present a character that fits a certain diagnostic, but one that is interesting, or funny, or encourages some kind of empathy or curiosity in viewers. Currently, the most popular character with most audience success displaying traits of Asperger’s syndrome is Sheldon Cooper, the theoretical physicist in the series The Big Bang Theory. Below, I will analyze this character along with examples of different approaches adopted in other successful series by comparing several characters with Sheldon.

**Sheldon Cooper and Asperger’s**

The Big Bang Theory is a sitcom that plays on the contrasting perspectives of a group of friends (Sheldon and Leonard, physicists; Howard, a space engineer; and Raj, an astrophysicist) and their partners (Penny, a waitress and later a sales agent; Amy, a neuroscientist; and Bernadette, a microbiologist). The series began airing in 2007 and to date (February 2015) is in its eighth season, after more than 170 episodes. The show’s central figure is Sheldon Cooper, a theoretical physicist at the California Institute of Technology, with two doctorates (the first obtained at 16) and a master’s, with an IQ of 187, who at the age of five was already writing scientific articles on his notepad. This towering scientific intellect contrasts with many other traits commonly associated with Asperger’s syndrome.

Sheldon always performs every action identically, which tends to be peculiar. For example, whenever he calls at Penny’s door, he does so using a sequence of: three knocks, “Penny!”; three knocks, “Penny!”; three knocks, “Penny!”.

Sheldon cannot cope with change, or having anyone interrupt his routines. Every week, he strictly follows the same program of meals and activities (according to him, “change is never

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<td>Dr. Gregory House</td>
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<td>Law and Order: Criminal Intent</td>
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good”). He always sits in the same spot on the sofa (not his favorite spot, simply his spot). When, in the first episode, Penny sits in Sheldon’s spot, he complains: “Um, Penny, that’s where I sit.” Penny says: “So, sit beside me.” “No, I sit there.” “What’s the difference?” Sheldon is clear on that: “What’s the difference? In the winter that seat is close enough to the radiator to remain warm, and yet not so close as to cause perspiration. In the summer it’s directly in the path of a cross breeze created by open windows there, and there. It faces the television at an angle that is neither direct, thus discouraging conversation, nor so far wide as to create a parallax distortion. I could go on, but I think I’ve made my point.”

Sheldon interprets what is said literally, without capturing the underlying sense in the other speaker’s words. So when he knocks on Penny’s door in the early hours of the morning, and she, annoyed, spits out: “Do you know what time it is?”, Sheldon replies calmly: “Of course I do. My watch is synchronized with the Boulder atomic clock, in Colorado. It’s accurate to a tenth of a second.”

Sheldon does not understand the implicit rules governing social relations, and he tries to study them using rational logic. In episode thirteen of the second season, “The Friendship Algorithm”, he wants to become friends with a colleague and visits a bookshop for a book to show him so as to make friends. The only one he finds is one for kids, about a cockatoo that has just arrived in the zoo. From the information obtained, Sheldon draws a flow chart for a “friendship algorithm” that is detailed, logical and yet totally useless in real life, since, as Sheldon himself recognizes, “parts of the human experience escape me”.

Society values honesty highly. So we teach our children they must tell the truth. However, children soon learn intuitively that this is not always the best idea. All children? No, not Sheldon. He is honest, rudely and brutally so. When Leonard, who is worried about his relationship with Penny, comments: “Penny thinks I’m too smart for her. That’s ridiculous!”, Sheldon has no problem answering: “You’re right. Most of your work is worthless.” Or when Leonard is worried that “girls like Penny don’t end up with guys who build time machines”, Sheldon disagrees: “I don’t agree. Your lack of attractiveness predate your work on the time machine, so your failure with Penny is due to other reasons.” And for Sheldon it is clear: “Why should I say sorry? I didn’t say anything that wasn’t true.”

Sheldon needs to have everything regulated, stipulated. He has a Roommate Agreement with his roommate that includes every last detail, and when he starts a relationship with Amy he establishes a Relationship Agreement that specifies factors such as the frequency and type of meeting, and the extent of physical contact.

Sheldon is probably the most popular character of all those displaying traits typical of Asperger’s. However, the viewpoint taken by The Big Bang Theory on this theme is one motivated purely by humor. In fact, the series co-creator, Bill Prady, claims that Sheldon’s personality is not based on this disorder (which was not as well-known when he created the character), but on computer programmers Prady used to work with. Furthermore, he believes it is better not to assign the label of Asperger’s to Sheldon because, on one hand, this would limit the series’ creative possibilities, and on the other, run the risk of other characters’ wisecracks about Sheldon being taken as wisecracks about someone with the disorder. However, whether voluntarily or not, Sheldon is a caricature of Asperger’s syndrome.

Was it a coincidence that the programmers who Prady was inspired by when defining Sheldon had such a similar personality to a person with Asperger’s? Or rather, is there some relation between IT and this syndrome? Before tackling this question, let us look at a series prior to The Big Bang Theory, whose star is in fact a computer programmer often credited with having Asperger’s syndrome (though in the series this is never explicitly stated). This is The IT Crowd, a British series that ran for four seasons (with a total of 24 episodes), broadcast from 2006 to 2010 (plus a final episode in 2013), which follows the ups and downs of a company’s IT department. As in The Big Bang Theory, this is a situation comedy that plays on the contrast between two very different personality types, embodied by two IT support
technicians (Roy and Moss) and the department head (Jen), who has no idea about computers.

To say that Moss is intelligent would only be partially true. Moss has huge logical and mathematical intelligence, which makes him suited to IT work, but his interpersonal intelligence is practically nil. He can communicate perfectly with the computer, but not with the people around him. Within the department, the work that would be best suited to him would be programming instead of users’ technical support. He also lacks common sense and the capacity to improvise suitable solutions in unforeseen situations. In a famous sketch, his office catches alight. After some moments of doubt, Moss looks for the fire extinguisher, places it carefully on the table and starts to read the instructions: “Stand vertically.” Moss interprets this to mean he must stand straight, but when he does so, finds that the extinguisher is no longer in his field of vision. “Oh, no! Now I can’t read it.” Faced with this difficulty, he decides to go back to what he knows and write an email to emergency services.

Moss, like Sheldon, is a character whose behavior has been adapted to the needs of the fiction. Even so, what they share with Dr. Asperger’s “little teachers”, and with the 107 million people who fall within the Autism Spectrum⁸, is a certain way of being and interacting with the world surrounding them, which is displayed through widely differing characteristics. One specific difficulty in studying autism is finding the core of the disorder — that which constitutes its essence and raison d’être. What does it really consist of? When Eugen Bleuler coined the term “autism”, which Kanner and Asperger later used to define this disorder, he took the Greek term αυτός to indicate that the individual was shut into themselves, because that was the trend he observed in the most seriously affected cases. But even in the cases where this occurs, the social isolation is no more than a manifestation of something deeper underlying the person’s cognitive architecture.

The variety of symptoms observed on the autism spectrum has a common denominator: cerebral functioning that makes the brain better suited to understanding and interacting with objects than people. Objects follow specific physical rules and are, therefore, predictable. On the contrary, people act according to their own will, guided by interests and objectives that are hidden from the outside and so are unpredictable.

The human brain is a complex computational mechanism that combines logical capabilities (reasoning, algorithmic method, conscious attention, mono-task processes, which are accurate but slow) and heuristic processes (intuition, imagination, automatic, multi-task processes that are fast but prone to error). In fact, in recent decades, some authors have suggested the existence of two different cognitive systems in the human brain.⁹ The relative level of each of these two systems varies in each individual; we all know people who are more intuitive and others who tend to be more methodical.

So the characteristics observed in the autism spectrum correspond to a brain in which a significant imbalance exists in favor of the former of these two systems, the one we could call logical, in detriment of the latter, the heuristic system. For this reason, patients with Asperger’s are more skilled in subjects governed by clearly determined rules, and in methodical tasks or ones with careful attention to detail, such as information technology. This would explain their more populous presence in this field.

Sherlock, Max, Hank and Saga

Below, I will look at other examples of television characters related with Asperger’s. The earliest example would be Sherlock Holmes, who was initially a literary character based on the real-life

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⁸ The statistic comes from current world population numbers, around 7250 million people, and from the aforementioned report which detects a prevalence of autism of 1.47%.

⁹ See, for example, the article “Dual-Processing Accounts of Reasoning, Judgment, and Social Cognition”, by Jonathan St. B. T. Evans, or the works of Shelly Chaiken, Seymour Epstein, Daniel Kahneman and Steven Sloman.
figure of Dr. Joseph Bell (1837–1911), an eminent Scottish surgeon. He was the author of several medical books (including *A Manual of the Operations of Surgery*), as well as being a pioneer in forensic science. He believed that every doctor should base their diagnosis on painstaking attention to detail, and he made every effort to encourage this trait in his students. So, it is said that in one of his classes he showed his students a vial containing a foul-smelling liquid into which he dipped his finger before licking it. He then indicated that the students should do likewise. Once they had finished, Bell repeated the operation, showing them that he had, in fact, dipped one finger and licked another. Through this, he aimed to teach them the need to focus on accurate observation of the facts. Bell himself was extraordinarily gifted in this capacity and in drawing conclusions from the smallest details. So his help was often required by the police in their investigations. (Some claim that he even assisted in the case of “Jack the Ripper”, but there is no evidence of this.)

One of Bell’s students in 1877, and later his assistant, was Arthur Conan Doyle, then a medical student at Edinburgh University, from where he would graduate four years later. Already, during his studies, Doyle had begun to write works of fiction, but those that made him universally famous were the stories starring the detective, Sherlock Holmes. Doyle admitted to Bell himself that he had created the character based on Bell’s personality, a combination of his acute concentration when at work, his passion for detail and his capacity for logical reasoning. And it may be supposed that, although he did not include them in the list, other of Holmes’s less praiseworthy characteristics, such as his lack of empathy, a certain arrogance, and the anxiety he attempted to counter with his addiction, also originated with Bell. All this encourages speculation on whether Holmes’s character, and consequently Bell’s, corresponds to the profile of Asperger’s syndrome. If so, Doyle was describing a case almost 60 years prior to Hans Asperger publishing his article.

Among the many adaptations of the character for the screen (both the wide and the small), the BBC series *Sherlock*, with three brief seasons of three episodes each in 2010, 2012 and 2014, with a fourth scheduled for 2016, present the famous detective in the modern world, adding new technologies to his arsenal of investigative resources. The image they present of Holmes reinforces his character within the autism spectrum. Right at the start of the first episode, a morgue worker paints her lips and suggests a date: “Listen, I was wondering... maybe later, when you’re finished... I was wondering if you’d like to have coffee?” But Sherlock does not capture the insinuation and responds coolly: “Black, two sugars, please. I’ll be upstairs.” Later, when she returns, disappointed at his response, without the lipstick, he asks her: “What happened to your lipstick?” “It wasn’t working for me.” “Really? I thought it was a big improvement. Mouth’s too small now.”

Though this type of behavior is repeated throughout the series, the only time when such a diagnosis is explicitly proposed is in the second episode of the second season, when Inspector Lestrade, annoyed at Sherlock’s behavior, complains to Watson that it “must be due to his character...”, and Watson confirms: “His Asperger’s?”

The series in which Asperger’s is explicitly dealt with is *Parenthood*, in which two characters have the disorder. The action is set with the following scene: While eating in a restaurant, Adam receives a call from his wife Kristina, who in a worried voice asks him to meet her. When he arrives, Adam sees the concern on her face. “What’s going on?”. “Um, I heard from the educational therapist. And she said that she has some concerns about Max. She feels that Max has some learning differences.” Well, that isn’t so serious, thinks Adam. They are both concerned about their son’s strange behavior, but if it is just an educational problem, it can be solved. “Okay, listen, I’ve given this some thought, I wanna contact the school, get Max a tutor to help him through this rough period.” But Kristina knows it is more than this. “Honey, she wasn’t just talking about... academics. ... Honey, she thinks that he may have...” Her voice fails her. “She thinks that he may have Asperger’s.” Adam is surprised and incredulous. “Asperger’s? Like autism? ... I’ve seen autistic kids. ... The Lessings’ kid with the hand flapping...” However, after the interview,
Kristina is better informed. “It’s high-functioning autism. A lot of people with Asperger’s... live very productive lives, Adam. ... [The therapist] said that if we get him the right tools to learn...”

Parenthood is a series by the channel NBC which narrates the difficulties of three generations of the Braverman family: Zeek and Camille are the grandparents, who have four kids, Adam, Sarah, Crosby and Julia, some of whom have partners, and kids. The fragment described, focusing on Adam and his wife Kristina, is in the series’ first episode, but could come from the real life of any of the many families who have undergone similar situations when they discover their child suffers from a disorder that they may never have heard about. Parenthood is the series that describes Asperger’s syndrome most explicitly and rigorously. The scripts are assessed by experts on the subject, and every two episodes the director, executive producer and the actor playing Max meet with an Asperger’s specialist to ensure that the performance mirrors the disorder. A singular feature of Parenthood that reveals its involvement with the disorder is that the series runs a blog10 called The experts speak, where doctors and researchers comment on episodes and offer families advice.

Max presents the social deficits and adherence to routines that are the diagnostic clues to Asperger’s. He is also hypersensitive (to sound and touch), is unable to understand facial expressions or implicit social rules, and suffers nervous crises or tantrums when anything alters his plans. However, one should not think that all children with Asperger’s are like Max, since each case can be manifested in differentiated aspects and to varying degrees. The way in which each person reacts to their difficulties is also different. In reality, two people with Asperger’s can be as different to each other as two neurotypical people might be, though this does not stop an expert professional from detecting the disorder after observing a child’s behavior for a while.

The highly realistic treatment of Asperger’s in Parenthood is because the series creator, Jason Katims, has a son with this disorder, which led him to research the subject thoroughly and to try to represent it on-screen in the most exacting and direct way possible. Virtually none of the series I included in Table 1 specify that the character’s characteristics are due to Asperger’s syndrome, or at most, this is indirectly insinuated at some point. Yet in Parenthood, the term “Asperger’s” is pronounced 125 times (in addition to “autism” or “autistic” 23 times, and “spectrum” another eight times, used in the sense of autism spectrum).11 In fact, after the second episode of the first season was aired, a curious event occurred. Though the initial episode had mentioned Asperger’s (in the fragment I copied above), the second episode emphasized it with greater intensity (13 times), so it seems to have lodged more firmly in viewers’ perception. Curiosity concerning a medical concept that people had not heard of meant that the morning after the broadcast, the most searched-for expression on Google was “Asperger’s disease”.

The most idiosyncratic characteristics of Asperger’s—as well as its repercussions for the individuals themselves and those around them (family, social network)—were being projected from the very first episodes. Just two minutes into the start of the series we saw the grandfather (Zeek) expressing his concern to Max’s father (Adam) because the child refused to play on the baseball team, preferring to stay home and play alone. Adam, who knows that Max dislikes baseball (because of his lack of skill at sports and because he feels uncomfortable in groups), tries to justify this, saying that the grandfather’s insistence on this score makes Max “a little nervous”, adding: “Max is a sensitive kid, that’s all.” Zeek’s abrupt answer expresses an entire viewpoint—unfortunately, one that is pervasive—of dealing with human diversity: “Well, you were sensitive too. I cured you.” These few words allow us to reflect on certain therapeutic methods that aim more to adjust children’s behavior to the social standard than to help them develop their specific

10 http://www.nbc.com/parenthood/blog/the-experts-speak
11 Not counting the final episode, which had not been aired at the time of writing this paragraph.
capacities and live fulfilling lives. And in case the idea, given its briefness, goes unnoticed by viewers, the next scene shows Max’s mother (Kristina) and sister (Haddie) wondering why baseball is so important. Kristina’s answer is clear: “Well, because men feel the need to express their love through hitting balls, slapping butts, and discussing meaningless statistics. And I think your father thinks that if Max doesn’t do these things he’s gonna grow up to be sad and alone.” Haddie concludes: “Well, that’s absurd.”

After the therapist indicates to them that Max may have Asperger’s, Adam and Kristina begin to do research and get in contact with the parents of another kid with Asperger’s, who recommends they follow a gluten-free diet: “No wheat. No sugar. No chemicals. Casein-free too.” Kristina asks: “What’s casein?” A quick comeback: “I don’t know.” And immediately: “We have a nutritionist that you are gonna love.” (This is a nod at the “cures” that are sometimes proposed in certain circles, arising from the impotence that some parents feel at not finding a solution to their child’s problem.) However, the next piece of advice is useful: “You’re going to need a behavioral therapist. They say Dr. Pelikan is the best. … [but] no one gets in to see Pelikan. He’s an elusive ass. He’s like the Bob Dylan of autism.”

Luckily, a chance situation gets them an early appointment with the doctor. After the visit, Pelikan tells them his diagnosis: “Max is very high functioning. But I do find that Max’s behaviors are consistent with an Asperger’s diagnosis.” The confirmation falls like a piano on the parents, who were hoping it might be something temporary: “So how long is this going to take then?” The reality is quite different: “Unfortunately, there is no cure for Asperger’s.” It is a syndrome that he will always have. Kristina: “What... what are we supposed to do for him?” Then the series, through Dr. Pelikan, gives advice to viewers who may find themselves in this situation: “You will help to uncover Max’s gifts. You figure out how he learns. You get as much support for Max as possible. Quite honestly, the research clearly shows the greatest barometer of success for children with Asperger’s is their parents’ involvement.”

One aspect that concerns parents when they receive such a diagnosis about their child and still do not know much about Asperger’s is the fact that it is not temporary, but a characteristic that will accompany their child all his life. Adam expresses it like that when they return home after their visit to Dr. Pelikan: “I can deal with anything. I... I can deal with disease, with illness, with a broken bone. Give me something I can fix. But I just... I don’t know how to deal with this. This is for life.” True, autism spectrum disorder is for life, but that does not mean that it always affects the person in the same way as it does during the early years of development—at least not in most cases, especially if help is given early. Even without this help, many people who were children when the disorder was still unknown are now adults leading apparently normal lives.

Children with Asperger’s—without abandoning the essence of what makes them like that and constitutes the way they are and see the world—can learn to integrate and relate with their environment, and to become capable of contributing their special personal capabilities toward society’s progress (as many of them have done). Parenthood reflected this throughout the series, showing Max’s progressive evolution in self-control, his social relations and, in the sixth and last season, his first romantic crush on Dylan, a classmate suffering from attention deficit hyperactivity disorder.

Yet furthermore, to complete the life perspective of the person with Asperger’s, from the fourth

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12 “It’s important to value our children as individuals, even if they are not the children we expected them to be. The tragedy of our society is the rush to services that are geared specifically at inculcating conformity as opposed to helping the child develop into the unique adult they will eventually become. We easily forget that the goal isn’t a well-behaved child but a happy, successful and independent adult. An intervention is deemed ‘successful’ when the child appears to behave just like all of the other kids, but little attention is paid to the long term goal or the ramifications of forcing square pegs into round holes.” Corin Barsly Goodwin and Mika Gustavson, 2011. Available at: http://www.thinkingautismguide.com/2011/02/asd-and-giftedness-twice-exceptionality.html
season onward, the series incorporated an adult character: Hank, a man with few social skills. He is a professional photographer who has a studio where Max’s family goes to get a group portrait done. Hank is looking for an assistant, and Sarah, who is Adam’s sister and Max’s aunt, applies for the job. Initially, Hank rejects her because of her lack of technical knowledge, but he soon realizes that Sarah has the skills for dealing with customers that he lacks and he hires her: “Turns out the people at the shoot, they liked you. They, um, made a big stink about it. So it turns out you’re good at the schmooze. And I hate talking to clients. Truly, I hate it. I get a little sick in my stomach sometimes. Yeah, so that’s why I was gonna call you. You’re not as awful as I originally thought.”

The relationship between Hank and Sarah, initially a professional one and later romantic, puts Hank and Max in contact, who, because they share similar character traits, become friends. One day Max gets angry at Hank because he had promised to help him with some photos and, due to work reasons, Hank could not. Max throws a tantrum, yells at Hank that he is a liar, and runs home to shut himself in his room. A few days later, Max’s father appears at Hank’s studio to apologize for this behavior. He explains that Max has a disorder called Asperger’s syndrome and leaves him a book on the subject so that he can understand what happened.

Minutes later we see Hank at night, reading the book with growing excitement, turning pages nervously and highlighting sections. He runs to Sarah’s house. Seeing him so troubled, she asks: “What’s this book? What’s up?” Hank answers excitedly: “I was reading this book for Max. And then all of a sudden, I’m not reading about the kid anymore. I’m reading about me! This book is describing me. I’m seeing my life. My life. I can see everything, absolutely everything. That is why stuff happens to me. I’m like him. I’m like Max.” How many adults in recent years have experienced that moment! For them all, the moment means finding the explanation for their past and perhaps being able to make peace with themselves.

Parenthood is the series that deals with Asperger’s syndrome in the most explicit manner, closest to the situation of many families who have similar experiences. I will end this review with another quite different series. This one never even names the disorder, but I consider it highly instructive, since both through its plot idea and in the relationship it establishes between the two leading characters, and even symbolically through the setting in which it takes place, and the series name itself, it sends a message that is valid not just for the case of Asperger’s syndrome, but for human diversity of any kind.

Bron/Broen is a series co-produced by Swedish and Danish public television along with the German channel ZDF. To date, two seasons have been produced, with a total of 20 episodes. The bilingual title means “bridge” (Bron in Swedish, Broen in Danish) and refers to Öresund (or Øresund) Bridge, an eight-kilometer-long architectural marvel that, along with a four-kilometer tunnel, links Sweden and Denmark. The bridge has a constant presence in the series, since it is on its central point, just on the line marking the border between both countries, that a body appears. The death must be investigated jointly by the police of Sweden and Denmark, countries separated by a certain social and cultural distance. From that moment onward, the characters are constantly forced to cross the bridge, both in a real sense, to pursue their investigation, and figuratively, by learning to understand and accept their differences.

In charge of the Danish side of the investigation is detective Martin Rohde, a man whose apparently calm and ample figure brings to mind a polar bear. Yet he pursues his work with a passion, to the extreme of taking justice into his own hands. In contrast, on the Swedish side, we have detective Saga Norén: a meticulous person, hard, cold and humorless, who follows the rules scrupulously, is incapable of lying, and brilliant in her

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13 Until August 2015. There has also been a US remake, The Bridge, that takes place on the border between the US and Mexico, and another Franco-British version, The Tunnel, centered on the Eurotunnel.
work, but with no skill at social niceties. No doubt the scriptwriters were guided by Asperger’s syndrome when defining her character, though at no time during the series is explicit reference made to it.\textsuperscript{14}

To a certain extent, Saga and Martin are the antithesis of each other, and so their initial contact causes mutual perplexity, incomprehension and some rejection. Nevertheless, little by little, they establish a bond, a form of male-female friendship unrelated to sex or even external shows of affection. I would venture to say it is such a relationship as might exist between an understanding father and a daughter who is experiencing certain difficulties. Martin manages to accept Saga’s way of being, and becomes her confidante and assessor in social questions, as through her he acquires a previously unknown view of the world. For her part, Saga learns to see Martin as the closest she has ever had to a friend, something she confesses at the end of the last episode aired, when she discovers he has committed a punishable offense: “I have analyzed your motives and I have concluded… you are my only friend.”

No doubt it is the lesson we should take away from the series: acceptance of human diversity in all its variety, and collaboration to overcome any differences (mental, nationality, culture, etc.) so that we can all build a better world.

\textsuperscript{14} I would note the coincidence (or not) that means that in the sample of characters displaying Asperger’s I have chosen, there are five males (Max, Hank, Sheldon, Moss and Sherlock) and one woman (Saga). In other words, the same ratio as in real life, according to the aforementioned CDC report.
Breaking Bad and Methamphetamine Addiction

Patricia Robledo

If any series has garnered close to unanimous approval among both critics and viewers, it is without a doubt the story told over five seasons about a common chemistry teacher’s descent into hell, a man who becomes the largest methamphetamine distributor in New Mexico. Thanks to Bryan Cranston’s outstanding acting, the character of Walter White has become a TV icon. Having won sixteen Emmys, the series, along with Mad Men, has turned cable channel AMC into a serious competitor with the all-powerful HBO. After the show’s 2013 finale, its creator Vince Gilligan presented Better Call Saul, based on a secondary character from the original series.

The main theme of the series Breaking Bad is synthesis and distribution of methamphetamine in a small US town on the border with Mexico. In a highly realistic way, the series depicts how the methamphetamine market can be a lucrative business, since there is huge demand for this product and because its synthesis is inexpensive, its chemical precursors being relatively cheap and easy to purchase legally. Meanwhile, the series deals with two crucial problems linked to methamphetamine trafficking. The first is the violence associated with the war for absolute market control, and the second, abusive consumption of this substance and its negative consequences. On the latter point, the series faithfully shows how methamphetamine is a highly addictive abusive drug which is mainly consumed for its long-lasting euphoria-inducing properties. It produces its psychostimulant effects by increasing monoamine extracellular concentrations in the brain. The fast, constant increase of noradrenaline is the cause of its known “toxic syndrome”, characterized by tachycardia, hypertension, mydriasis, diaphoresis and psychomotor agitation. Prolonged release of central monoamines and activation of the sympathetic nervous system produce most of the acute neurological complications associated with methamphetamine use, such as cerebrovascular accidents, convulsions, agitation and hyperthermia, and they are mostly the cause of abuse and addiction to this substance as well. The subject of addiction presented in the series agrees with scientific evidence and clearly shows the addictive process. So, according to one of the most influential theories, addiction to abusive drugs is established by the interaction of a vulnerable individual with the neurobiological changes the drug causes, which depend on the amount of exposure. Addiction is a recurring illness that consists of different phases, including the intensification of consumption or escalation, increase in the need to consume, loss of control and relapse into using even after prolonged abstinence.

The three faces of methamphetamine synthesis and distribution

Jesse Pinkman is a young high school dropout with substance abuse problems, who is rejected by his family because he cannot get off drugs and back into society.

Though he failed chemistry at high school, he has the formula for preparing methamphetamine—or crystal meth as it is called on the streets—which he prepares in a secret lab in his garage. Jesse’s formula, which is based on chemically re-
Breaking Bad and Methamphetamine Addiction

Producing pseudoephedrine, is the method used in real life. Jesse’s friends, Badger and Skinny Pete, are also drug addicts and undertake to source the raw material by buying the nasal decongestant Sudafed, which contains pseudoephedrine, from different pharmacies. Once the pseudoephedrine is extracted, it is reduced using iodine and red phosphorus to form methamphetamine or N-methylamphetamine. Jesse’s methamphetamine distribution is small-scale, using his drug-addict friends as pushers, who mainly sell the drug locally. According to the Spanish National Plan on Drugs, in Spain, methamphetamine is known by the names speed, meth, chalk, ice or crystal, and is consumed by smoking. It can also be taken orally, inhaled or injected, which determines the type and magnitude of the effects it produces.

Walter White is a highly intelligent man whose creative aspirations in the chemistry field are foiled, so he ends up as a high school chemistry teacher. The situation makes him deeply bitter because of the lack of incentive and his financial problems. Moreover, he has serious health problems involving costly treatment. By chance, Walter finds out that Jesse, a former student of his, is synthesizing methamphetamine under dangerous conditions. He decides to suggest a more efficient manner of synthesizing a large quantity of extremely pure methamphetamine. His idea is to earn a lot of money so that his family can live comfortably after his death from lung cancer. Walter is a disciplined, well-organized man, with an astonishing ability in chemistry, traits which will serve him well to improve the purity of the meth and set up a lab in a van that can travel out to desert regions to effectively elude the city’s police controls. In the series, Walter stops using the pseudoephedrine-based method because of the difficulty of acquiring large quantities of this precursor. Instead, he suggests using a methamphetamine preparation method known as “reductive animation” or “2P2 method”, which consists of reducing phenyl-2-propanone (P2P) using phenylacetone and methylamine. Methylamine is used in industry, but it is a substance that is tightly controlled by the anti-drug law enforcement agencies.

This method of methamphetamine synthesis is shown in episode “Seven Thirty-Seven” of the series, the first in the second season. Walter’s brother-in-law, who works for the US Drug Enforcement Administration (DEA), is surprised to see the video of a theft of methylamine and comments: “P2P – they’re cooking old school biker meth”. His comment refers to the fact that during the 1970s and early 1980s, methamphetamine was produced by this method and distributed by the Hell’s Angels motorcycle club in northern California, until it stopped being used due to the classification of P2P on the list of controlled substances. By the mid-1990s, most P2P labs had been substituted by pseudoephedrine/ephedrine-based labs. However, the law relating to methamphetamine precursors in the years 1993, 1995 and 2005 in the US meant that both ephedrine and pseudoephedrine also became controlled substances. This fact contributed to a decrease in the market and the recovery of the old P2P method of synthesizing the drug. So, in late 2010, 69% of American and Mexican samples examined showed that they were produced using the P2P method.

Some discrepancies between the TV fiction and reality have to do with the incredible purity that the methamphetamine prepared by Walter seems to have. So one feature of Walter’s methamphetamine is its blue color, which in strict chemical terms does not agree with its claim to be 99% pure, given that this color is a sign of impurity. Another discrepancy with real life is related to the fact that the ultra-pure methamphetamine that Walter prepares is found on the streets in equal purity, which does not normally happen because distributors tend to adulterate the drug with other compounds to increase its volume and earn more profit.

Walter also changes the means of methamphetamine distribution to make the business more lucrative, associating with an extremely dangerous Latin distribution network. These two means of methamphetamine distribution are faithfully reflected in the series. The first, on a small scale, carried out locally by drug addicts, and the other on a large scale, controlled by mafia.

Gustavo Fring is a Latin drug trafficker who controls the business in the American west in an
organized way. He passes completely under the radar because he has an infallible money laundering system. Walter and Jesse are associated with him to synthesize big amounts of meth in a large secret lab that Fring sets up for them in the city where they live. This fact is similar to the reality of the so-called super-labs, that are known in Mexico and which probably also existed in the US at some point. In the tenth episode of the fourth season, called “Health”, Gus Fring takes Jesse to Mexico by force to make him try his hand at synthesizing ultra-pure methamphetamine in the Juárez Cartel. There, he sees one of these super-labs, run by this criminal gang. Fring is a dangerous man who does not hesitate to eliminate the boss of the Mexican cartel, who is competing for the trafficking and distribution of methamphetamine on American turf. The methamphetamine trafficking by Mexican criminal gangs as described in the series is plausible, given that the decrease in methamphetamine production in the US noted since 2003 was countered by an increase in Mexican production. The Mexican drug cartels became more involved in that trafficking, and the amount of methamphetamine confiscated on the border between the US and Mexico increased considerably in 2003. In 2008, Canadian trafficking organizations increased their participation in meth production worldwide, while Mexican cartels invaded the market in the US.

The different profiles of meth addicts

The second season of Breaking Bad depicts in a fairly realistic manner some of the existing patterns among methamphetamine users. On one hand, Jesse and his friends generally sniff or smoke the drug, so that moderate doses produce quick effects such as euphoria, heightened attention, a loss of appetite, increased libido and self-esteem, and improved mood. Yet Jesse appears in the series as a true addict who does not limit the amount of methamphetamine he uses because he has unlimited access to it. In a scene from the second season’s eleventh episode “Mandala”, when Jesse meets Walter to talk business, we see the effects associated with consuming high doses of methamphetamine as Jesse is stricken by dysphoria, restlessness and anxiety. Furthermore, he displays bruxism (clenching or grinding his teeth for no reason) and the shakes. In the series, Jesse is the typical meth addict who little by little loses control of his life and the support of his parents due to his addiction. So, in “Down”, the fourth episode in the second season, we see how Jesse becomes homeless because his parents have found out he has set up a meth lab in the house he inherited from his aunt. In Jesse we see the relapse into seeking out the drug and returning to using after adverse situations or depressing episodes, such as in “Mandala”, when he feels guilty and sad about the death of his friend Combo and starts to shoot up heroin with his addict girlfriend. This episode offers fairly realistic scenes about the effects heroin has, in clear contrast to the effects of methamphetamine. Injected heroin induces a wholly pleasant sensation, characterized by a marked indifference to internal and external stimuli. The peak of euphoria occurs seconds after injecting the drug and tends to last several minutes, while the feeling of well-being can last from four to six hours. However, heroin does not induce psychomotor action, given that it is a depressant of the central nervous system. Large amounts of heroin can cause extreme drowsiness, with the risk of inducing a state of coma or decreasing the cough and expectorant reflex, which can cause one to choke on one’s own vomit. This is reflected in the tragic case of Jane, Jesse’s girlfriend, who dies in precisely this way.

On the other hand, methamphetamine also induces a fast peak of euphoria that can last for many hours, depending on whether it is inhaled, smoked or injected, through activation of the central nervous system by its effect of releasing monoamines. At the end of the second season, in episode thirteen, “ABQ”, Walter takes Jesse to rehab. We see his affective deterioration, feeling guilt at his girlfriend’s death. The situation Jesse finds himself in is no doubt because of the affective deterioration characteristic of those who chronically abuse methamphetamine, who frequently have problems experiencing pleasure (anhedonia) and fall into deep depression from the exhaustion of cerebral reserves of dopamine.
and serotonin in the neuronal terminals.\textsuperscript{1} Through Jesse’s character, the series shows addiction truthfully, since the affective problems and possible cognitive deficit that Jesse experiences contribute significantly to perpetuating the addictive cycle, characterized by abuse, loss of control and relapse.\textsuperscript{2}

The third episode, “Open House”, in the fourth season, shows how Jesse increasingly loses control over his actions and seems quite unbalanced when, after killing Gale, he throws an interminable party in his house with other drug addicts, consuming huge amounts of methamphetamine. The situation degenerates, evolving from dancing to violence. This episode shows the reality of methamphetamine use in the form of binges, which can last several days, and where the euphoric effects of the drug progressively decrease over time, while dysphoria and compulsive and repetitive behaviors increase. This use profile is perfectly captured by Jesse’s party, where after several days of euphoria and dancing, the guests start to become violent and engage in risky sexual behavior. The behaviors described in the series (which Jesse dramatizes) are linked to pathological deregulation of the cerebral circuits involved in pleasure and motivation caused by the addiction. So, taking most abusive drugs, including methamphetamine, increases dopaminergic transmission in specific cerebral centers that reinforce the behavior of seeking and consuming the drug, facilitating the reiteration of learned behaviors and encouraging addiction. From the uncontrolled need to obtain the drug stems the relapse, the basis of which is a pathological form of neuronal plasticity in the excitatory glutamatergic system. Such deregulation means that the individual addict places excessive motivational importance on stimuli that predict drug availability and it reduces his or her ability to stop using it.\textsuperscript{5}

Meanwhile we have the characters of Spooge and his girlfriend, two addicts on the fringes of and disconnected from society. These characters show the reality of chronic methamphetamine addicts, who are often multi-drug addicts. But because they cannot pay for cocaine or heroin, they consume meth because it is cheaper. They will do anything to get the drug, even prostitute themselves, as Spooge’s girlfriend does. The episode “Peekaboo”, in the second season, shows the marginal conditions in which this couple live, with a small child who is totally uncared for. These two characters suffer from serious side effects that truly occur after chronic meth use; for example, both show evidence of malnutrition and poor dental health associated with serious cavities and the loss of teeth. The latter is due to the drug’s acidic properties combined with a lack of oral hygiene. Xerostomia (dry mouth) also adds to the dental problems resulting from methamphetamine use. Spooge and his girlfriend also have skin damage as a result of the compulsive scratching that accompanies methamphetamine use. Such injuries tend to get infected, resulting in a bacterial cellulitis that spreads to become bacteremia and sepsis in some cases.

In addition to these examples of methamphetamine users in the series, two other individuals use the drug but do not become addicts. This aspect, which the series does not examine, is linked to existing differences in the population in terms of individual vulnerability of entering the addictive cycle after sporadic or recreational drug use. Experts believe that 12 to 20 out of every 100 people who begin to use drugs will develop addiction. Yet the risk that these addicts relapse into using the drug, even after prolonged periods of abstinence, is extremely high.\textsuperscript{2} In 2013, the Washington Post\textsuperscript{6} published an article on the type of person, known as a “functional addict”, who consumes methamphetamine and seems able to remain socially active. Some of the examples mentioned were working mothers, or people holding down several boring and poorly paid jobs who use meth to boost their energy and alleviate the tedium of their social and working conditions, or university students wanting to improve their cognitive capacities. As has been mentioned, the addictive process depends on the drug use and its interaction with the individual’s preexisting genetic or behavioral vulnerability. So some of these people, perhaps the most vulnerable, enter the spiral of addiction and lose control over their
drug use to the point of failing at work and dis-
connecting socially.

Could Breaking Bad encourage methamphetamine use?

Though the series deals realistically with meth-
amphetamine addiction and its devastating ef-
facts, some believe that Breaking Bad may have 
encouraged consumption of this drug. In 2014, 
several articles appeared in the Spanish press in-
dicating an increase in the confiscation of meth-
amphetamine in the UK and rising use in Ger-
many in the past five years. For some, this fact 
could be related to the series, while others claim 
that “it is more correct to say that the series has 
made people aware of this drug”. On the other 
hand, a report from the DEA indicated that the 
number of methamphetamine-related incidents 
in the US in 2012 was the lowest since 2008, the 
year the series started. So it does not seem to 
have influenced in the consumption of this sub-
stance.

Though methamphetamine use could be 
dropping in the US, it remains high in Asia, and 
worldwide consumption has become an epi-
demic. According to the UN Office on Drugs and 
Crime (UNODC), it is estimated there are 25 mil-
ion amphetamine users worldwide, a larger num-
ber than cocaine (14 million) and heroin users 
(11 million). Furthermore, studies indicate that 
methamphetamine synthesis and distribution has 
increased in countries such as Poland, the Czech 
Republic and the Russian Federation, as well as 
developing countries in Africa and Central Amer-
ica. In Spain, methamphetamine consumption is 
low due to its high price, and seems to be linked 
above all to elitist use on the gay scene.

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Mad Men and Tobacco Addiction

Joan R. Villalbí

Don Draper is, in all likelihood, one of the most representative icons of the golden age that TV series are currently enjoying. Set in a New York ad agency in the 1960s, the show is a true and elegant reflection of a period characterized by social discrimination, and has reaped the most prestigious accolades since it premiered on the cable channel AMC in 2008. It scored four consecutive wins as Best Drama in the Emmys, and three Golden Globes, totaling 20 awards over its seven seasons on air. Even before its finale, it was considered one of the best series in television history.

Big tobacco companies have used different strategies to promote tobacco use for decades. Naturally, direct advertising is the most significant, and one of the most effective; billboards on the street, seen by the general public in their daily lives, is one of its favorite supports, as well as adverts in the printed press and spots on radio and TV. In such adverts, it is common to show popular figures smoking, and the stars of film and TV were doing it from the 1920s onward. So Humphrey Bogart and Lauren Bacall starred in tobacco adverts in the 1940s, but so did many more US artists, until the practice was declared illegal in 1964. As governments in many advanced societies adopted policies to reduce the damage that tobacco was causing, for example prohibiting the advertising and promotion of tobacco, the industry sought ever more subtle ways of promoting itself. One of these was through its presence in films or on TV. In recent years, it has come to light that both studios and artists signed contracts with tobacco companies that led to attractive film stars visibly smoking, or even making favorable comments on tobacco brands. These tactics intensified in the 1980s, and it has been documented that during the following decade the presence of smoking on-screen in Hollywood films increased, especially in films rated for general exhibition. Internal tobacco industry documents revealed in North American court cases document this, and the work of Stan Glantz and his collaborators at the University of California provides ample evidence.

Mad Men is a successful TV series, which many consider a work of art. In recent years, part of the creative talent that time back was employed in films has migrated toward TV series on channels like AMC and HBO. Mad Men is part of this process. Since the series is set in the 1960s, when smoking was common in the US, tobacco plays a significant role, leading to the formulation of this analysis from a double perspective: the viewpoint both of a fan of the series, and of a public health professional involved for years in the prevention of smoking.

The historical context of Mad Men

The series Mad Men premiered in 2007 in the US, on the cable TV channel AMC, and ended in 2015, after seven seasons. Set in New York throughout the 1960s, it focuses on an ad agency located on Madison Avenue (hence the reference to “Mad men”, the men of Madison Avenue in ad agency slang, since there were numerous agencies located in the area at that time). The drama follows
the career of the creative Don Draper and the people in his personal and professional sphere, centering on ad agency business and the life of its stars during several years of frenetic changes in the US, up until the 1970s. This period allowed the series, using images and dialog, to place several themes center-stage: cigarette smoking, alcohol consumption, persistent sexism, budding feminism, frequent adultery and infidelities, hidden homosexuality and homophobia, anti-Semitism, and signs of flagrant racism. Throughout the series, events occur which pervade the action: Kennedy wins the elections, the contraceptive pill comes onto the market, the Vietnam War breaks out, the damage that tobacco causes is documented, and so on. Yet perhaps its major pillar, one of its main underlying themes, is the deception people weave and their projection of identity. We see characters living a lie, hiding key elements of their identities, lives and past, who are, moreover, constantly deceiving the people closest to them. A certain parallel exists between such aspects and the ad agency’s core activity, which builds an unreal image of the brands and products it promotes to consumers.

In the early 1960s, tobacco use in the US had reached its critical point. For decades most adult men had smoked, and since the mid-1940s it had been widely taken up by women too. Its social acceptance was widespread. One smoked at work, on trains, in bars and in restaurants. Advertising frequently laid claim to the presumptive benefits of one brand over another, and its less irritant properties. It was not infrequent to show health professionals on cigarette adverts. In 1965, the prevalence of smoking was 42.4% (51.9% of men and 33.9% of women).

Early studies incontrovertibly showing the damage caused by tobacco were published in the 1950s. Foremost among them was Richard Doll’s pilot study in the UK and a study of cases and controls by Ernest Wynder in the US. This knowledge began circulating in professional circles and had a certain impact in the press, but it was not until the early 1960s that the relationship between tobacco, lung cancer and other diseases became generally accepted and reached the wider general public through the media. The detonators were the 1962 report by the Royal College of Physicians in London, Great Britain, and publication of the US Surgeon General’s Advisory Committee report in 1964. Statistics on tobacco use showed the impact of the Surgeon General’s report, which marked a clear turning point, since its publication prompted many desertions from tobacco’s cause. So 1963 was the year of greatest tobacco consumption per capita in the US (this has been estimated at 4345 cigarettes per inhabitant over 18). After the Surgeon General’s report in 1964, many states and cities began to pass regulations aimed at reducing tobacco addiction. This process led to the current situation, where 20% of adult Americans smoke, a ratio that in New York City drops to 14% of the population. In this city, one cannot smoke in the workplace, on public transport, in bars or restaurants, or on beaches or in parks. (The fine for smoking in a public park is $US50.) The cost of cigarettes is high due to specific taxes (in New York, the average price for a packet is $US12). Tobacco cannot be sold to persons under 21 in the city. Lastly, messages warning against smoking, offering reasons to stop smoking are everywhere.

The key tobacco moments in the series

Throughout the series, tobacco is constantly present. The main character, his wife and many of the adult characters are smokers. The absence of tobacco regulation in the period means that they smoke in the office, in meetings, in bars and in restaurants. The characters constantly smoke. In addition to tobacco’s omnipresence, there are three key moments when tobacco is not merely part of the atmosphere but plays a leading role in the show: in episode one of the first season (focused on tobacco advertising); in the twelfth of the fourth season (when they talk about the damage tobacco causes); and in the final episode of the seventh and last season (where lung cancer affects one of the main characters). We should review these moments.

In the first episode (named, like The Platters song, “Smoke gets in your eyes”), the agency is trying to win an important contract with the com-
pany that manufactures the cigarette brand Lucky Strike. They must combat a growing social perception that tobacco is bad for one's health (an opinion the Reader's Digest has just published), as well as a prohibition by the Federal Trade Commission from evoking health benefits in advertising as was previously common (the tobacco company executives rant about these marketing obstacles, with references to Russia and communism). To prepare for the meeting, Don Draper holds apparently trivial conversations with the smokers around him, delving into their reasons for smoking and for choosing a brand. He also has a meeting with a medical consultant, a psychoanalyst, who indicates that an underlying element for smokers is a death wish. In his meeting with the tobacco company executives, which develops in rather an insane manner, where naturally any concern about the damage tobacco may cause is rejected or ignored (though as committed smokers, they are visibly coughing), Don Draper, who was creatively blocked, is struck by sudden inspiration and proposes an ad campaign that differs from those that have been typical up to that point. He suggests ignoring any concern about tobacco and health, and seeking connections with their customers' aspiration to happiness: based on the smokers' stories and identity. He advocates building the brand image based on colors, logos and slogans. Pure advertising: “Lucky Strike. It’s toasted.” While Lucky Strike was already a brand that used a play on words, “It’s toasted” refers to the fact that during manufacturing, this tobacco is toasted instead of just dried (other brands also do this, but they decided to make a feature of it). Simultaneously, they sought a connection with the customer by evoking the morning toast and relaxed daily life. A surefire success. (In fact, this story is pure fiction, since the slogan “It’s toasted” was coined decades earlier.)

At the end of the fourth season, Lucky Strike abandons the ad agency after 25 years of contracts and signs with another agency. In episode 12, “Blowing smoke”, the agency's survival seems threatened by the consequences of this change, which affects its image. An attempt to capture Philip Morris as a substitute client fails. Don Draper reacts and writes a letter to the New York Times entitled “Why I’m Quitting Tobacco”, in which he proclaims he is happy to stop publicizing a product that kills its users, and that henceforth he will not accept tobacco companies as clients. Furthermore, he publishes the letter as a full-page advert. Naturally, everybody keeps smoking in the office, while the agency has serious financial difficulties and must lay off staff. Yet in the next episode, it wins new accounts and begins talks with the American Cancer Society, which is possibly interested as a client, from the result of Don Draper's advert against tobacco companies.

In the seventh season, at the end of the series, the attractive Betty (Don Draper’s ex-wife), an ex-model and heavy smoker, undergoes tests after suffering health problems and receives the diagnosis of lung cancer. They tell her the prognostic is grim: she has a few months left, though she may survive for a year if they undertake aggressive treatment, which she refuses. So she prepares for her death, notifying the people around her, while she organizes her children's future... and keeps on smoking. Furthermore, in the last episode, Roger Sterling also appears. He is the character who indulges in every excess, with heart attacks in his past since the first season. And he continues smoking, drinking and ordering lobster and more champagne, along with his young partner.

Tobacco use in the series and during the period

As mentioned above, tobacco use in the series reflects reality throughout the 1960s. At the start of the series, set in 1960, smoking is common among adult men and women, except for old people. Smokers smoke everywhere: naturally at home, but also on the train on the commute, at the office, in bars and restaurants. Naturally, this means that smokers smoke heavily. Early data tell us that in 1965, many smokers smoked more than a packet a day. So the levels of tobacco consumption shown in the series are in line with contemporary reality.

Another element to note is that Don and Betty’s adolescent daughter begins smoking in
Mad Men and Tobacco Addiction

secret, a detail that also seems to reflect with certain realism the process by which some people began smoking back then. Equally shocking is how her mother, wanting to improve their relationship, offers her a cigarette in one scene, an act in which she seeks to create complicity. For people of my generation, this was not an unusual event in the family circle, or with certain teachers. Nowadays it would clearly clash with our current sensibilities.

The series is set in an ad agency, so this occupies a relevant space. There were no limits on tobacco advertising in those days. The federal prohibition against tobacco advertising on electronic media (radio and TV) came about in the 1970s. The reality was that advertising expenses for the tobacco industry were then far lower than in the early twenty-first century. What the series shows is fairly true to life, tobacco being one of the important accounts for an ad agency. Until the early 1960s, ad campaigns did not hesitate to evoke the presumed benefits of smoking, using doctors and other health professionals in ads. Facing concern about the damage caused by tobacco, advertising was reoriented to transmit feelings of happiness, relaxation and daily life linked to their customers’ identity and aspirations. Initially, no mention was made of luring adolescents towards smoking, or of market segmentation by gender or race (though in later episodes set in the late 1970s, a Philip Morris campaign did appear aimed specifically at the female market). In my understanding, it is probable that advertising’s omnipresence, along with consumer reality in 1960, made any segmentation unnecessary. In the fourth season, in the episode described above, set in 1965, when Don Draper makes public that the agency will not accept any more tobacco advertising because it is a product that harms its customers, he is trying to turn the loss of his largest account to his advantage, to position himself favorably in the light of publication of the Surgeon General’s 1964 report. In later episodes, the American Cancer Society organizes an event in his honor and it seems like a good opportunity to win new clients, but we are informed that the executives of the large companies attending the dinner consider Don Draper rather unreliable due to the publication of his letter on tobacco.

Tobacco’s consequences: reality and image

Tobacco’s negative consequences appear in the series. Betty’s lung cancer, diagnosed at a surprising age due to her youth, is probably the most striking (though it appears only in the final two episodes of the last season, among a number of episodes). Roger Sterling’s heart attacks are there from day one, and tobacco shares its causal role along with other risk factors. But this does not stop Roger smoking and he generally gives an impression of doing everything he can to endanger his health while continuing to have a good time. In the later seasons, Don’s cough emerges (as well as his problems with alcohol), which does not stop him smoking. There are mentions of other risks linked to smoking. Perhaps one should highlight that the explosion that unleashes one of the main plot strands (Don’s false identity after the war) is the result of him dropping his lighter in spilled fuel. There is even a scene in which Megan’s mother falls asleep in bed with a lit cigarette, posing a risk that her daughter discreetly resolves. In general, the consequences of tobacco are present, but given little space. So, while it is true that the series does not flinch from such consequences, they are barely communicated to viewers. Regarding tobacco, Mad Men viewers basically receive many images of people smoking a lot, which sends out a message that smoking is normal behavior. This was the social perception in the 1960s, but fortunately nowadays this is not so, neither in the US nor in Spain. From this, a certain dissonance arises.

Tobacco and freedom of expression

As other TV series and films, Mad Men poses certain dilemmas. As mentioned earlier, it is well-known that for years the big tobacco companies paid the film and television industry to guarantee its presence on-screen as a form of promotion. Tobacco is overwhelmingly present in Mad Men, and naturally the Lucky Strike brand fea-
tures. Throughout the series, many other product brands appear, many of which remain on the market today (Jack Daniels, Gillette, Playtex, Maidenform, Cadillac, Volkswagen, etc.), so there has been a lot of speculation about product placement. According to Matthew Weiner, the series creator and executive producer, only three companies paid for placement: Jack Daniels, Heineken and Unilever (and also the Hilton, which apparently made a payment after appearing in an episode, as an expression of gratitude). The other brands and products that appear (up to a hundred) were placed to give the series more realism, with no commercial agreements. One should not forget that there are storylines, especially in certain periods and places, where the absence of tobacco could affect their authenticity. This is not just true for tobacco, but also for alcohol, for sex and, in reality, for many human behaviors and aspects of daily life that can be related to health or the beliefs of a segment of viewers.

We know that to reduce tobacco smoking in adolescents, different forms of their advertising and promotion must be prohibited. I personally documented the artful practices of the tobacco industry in our country, which were totally at odds with the self-regulating codes they claimed to adopt. I was also an active agent in the process leading to Spanish Law 28/2005 that regulated this issue in a positive manner. Nevertheless, I believe that the border between freedom of expression and censorship is sometimes tricky to demarcate. My values are also in favor of freedom of expression, even when this challenges hegemonic opinions. I can confirm that every time I see a rerun of Die Hard showing Bruce Willis smoking with gusto, I curse the tobacco companies, which paid to ensure its inclusion. And yet, when I see the third film in the The Godfather trilogy, which also received funds from the tobacco industry, I cannot do so. Perhaps the difference is in the distinct pleasure that one and not the other give me, but maybe this is simply a reflection of the dilemmas that we perceive life throws at us at certain ages.

Like many other complex works, Mad Men can be read on several levels. For a superficial and occasional viewing of the series, I think it transmits a favorable message about smoking—that which is visible. On another level, of full viewing, the message is more complex. And on yet another, a fuller and perhaps even more sophisticated reading will capture the series’ finer details, where a message against smoking will emerge, as will a characterization of the industry and the visibility of its consequences at the series’ end. It seems that, on the whole, in the lives of people who watch Mad Men, the overall impact we hope it may have on our attitude to tobacco will probably be modest. And so, aware not only of tobacco’s role in the show, but also of the enjoyment the series has given me, and bearing in mind the values in which I believe, I wholeheartedly recommend it to my friends.
The Walking Dead and the Collective Imaginary on Epidemics

Josep M. Comelles and Enrique Perdiguero Gil

If Mad Men and Breaking Bad are the two series that have taken the cable channel AMC to such great heights as its competitor, Premium HBO, this post-apocalyptic tale based on a Robert Kirkman comic depicting a world populated by zombies is the show that has brought it audiences in the millions, greater even than many free-to-air productions. Premiered in 2010 with over five million viewers, it has managed to multiply this figure threefold in its recent seasons, approaching fifteen million viewers. Such a favorable reception enabled AMC to try its luck with a sequel set in Los Angeles, Fear the Walking Dead, a strategy that so far has shown fairly good returns.

Though series such as Mad Men, Breaking Bad, Fargo and True Detective scooped the major international awards, in the light of data from countries that publish audience levels, The Walking Dead is the most-watched series on cable TV. The same occurs in Spain. Is this a further example of viewers’ preference for action and violence over complex and convoluted storylines? Perhaps, but the truth is that the series tries to go beyond the horror-series stereotype, and aims to analyze how far human beings will go when struggling to survive. The Walking Dead has not just earned viewers’ applause, but also garnered academic interest. Theses, monographs and dozens of articles in science journals focus on the walking dead and its groups of survivors. Under the umbrella of such success, zombies and the undead are once again clamoring for attention, since The Walking Dead is another link in the chain of audiovisual products focused on such figures. In these pages, we highlight some of the cinematic milestones related to the living dead, their close relationship to the collective imaginary on epidemics and how this tradition crystallizes in the series, along with its peculiarities.

Epiphany of the undead

In 1943, Jacques Tourneur directed the film I Walked with a Zombie, shortly after publication of Voodoo Death, a foundational article, based on ethnographic sources, regarding the physiological mechanisms related to voodoo death. The living dead and psychosomatic medicine were broached in a centuries-old debate on the capacity of witchcraft and spellcasting to summon and condemn souls to wander the earth. An example is the myth of the Santa Compaña ("Holy Company"), a procession of the dead that winds through the woods of Galicia, prompting villagers to lock their doors after sunset and erect cruceiros (calvary crosses) at crossroads to exorcise them.

Tourneur managed to conjure the mystery of the border between life and death, the intimate relation between reality and psychotherapy, by employing visual ellipsis prodigiously and elegantly regarding a beautiful undead woman. He knew how to visually represent the mystery of the Santería religion in a clinic for psycho-neurotic disorders. Prior to and even more ably than in

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1 Written by Walter B. Cannon in the magazine American Anthropologist, in 1942.
Ingmar Bergman’s *The Magician* (1958), he depicted the contrast between the beliefs and cultural practices of magic, and medical rationalism. This is because, in contrast to the Swedish director, he speaks of the present, not of a figure of the past.

The undead, lost and wandering souls, form part of an ancient collective cultural imaginary, which drew new life from the romanticism of the Brothers Grimm and folklorists, Washington Irving’s *Tales of the Alhambra* (1832), many of Edgar Allan Poe’s short stories, Gustavo Adolfo Bécquer’s *Leyendas* (1854–1864) and the recovery of Oriental folklore. Bishop (2010) considers, erroneously, that zombies in film correspond to highly idiosyncratic aspects of twentieth-century American culture. He does not take into account the genealogy of the undead in European literature and film. Spirits that become flesh populate stories retold beside the hearth, while the wind moans outside and rain batters the shutters. At the height of positivism, Allan Kardec (1804–1869) wished to bring them to life. Clustered around the lamp, believers invoked their presence, drafts without a source wafted the curtains, and the living were carried off into trance by spirits. In *The Canterville Ghost* (1887), Oscar Wilde wrote ironically about Americans who made fun of British ghosts, and in *Dracula* (1897), Bram Stoker invited the undead into Victorian drawing rooms as if they were an epidemic vector. Yet filmic epiphany of the undead should be attributed to *Nosferatu* (1922), by F.W. Murnau. It is a palimpsest of Bram Stoker’s work, and an extraordinary visual recreation blending expressionism and neo-Romanticism. *Nosferatu* emerges from his coffin in the bilges of a barquentine swarming with rats, on which no souls remain alive, to alight in a romantic Bremen. Rats, sailing ships, quarantine, epidemics... After the First World War, the deadly “Spanish flu” revived a fear of the plague in the western cultural imagination, a scenario in which rats arrived by sea in the holds of ships and silently invaded the cities, carrying the Black Death. The Flying Dutchman, a ghost ship, still haunts a collective imaginary that builds on the experience of sailing ships adrift which, an epidemic having killed both crew and passengers, roam the seas at the mercy of wind and wave endlessly seeking peace. A barquentine is likewise the improbable mode of transport in the 1940s by which the protagonist of *I Walked with a Zombie* reaches his destination in the British West Indies (a visual homage to Murnau?). This ship, however, is not plagued by any rats, undead or epidemic, since the witchcraft is on the island and forms part of a world that clashes with the rationalism of the clinics.

A cinematography of wandering souls

Murnau’s and Tourneur’s visual magic has perhaps faded over time and from the tapestries of memory. After the Second World War, film recovered Dracula the vampire, but not zombies. It is tempting to imagine that Tourneur raised the bar so high in terms of sophistication and narrative elegance that later creators dared not follow in his tracks. Yet the British film company Hammer generated extraordinary interest in “Draculas”, Christopher Lee playing the role, in which he explored the vampire’s sexual and erotic dimensions. Between Murnau’s neo-Romanticism, *Nosferatu*’s monstrousness and Christopher Lee’s Gothic yet very British elegance, there was, however, narrative and visual continuity. And so it was, until in the year of May 1968, with Vietnam escalating and race riots erupting in Pittsburgh following Martin Luther King’s assassination, an unknown filmmaker named George R. Romero directed *Night of the Living Dead* (1968). In the midst of the Cold War, decaying corpses return to life, stepping, like Lazarus, from shattered tombs in all their rotting glory. For reasons never fully explained, they make the same gestures as Nosferatu, and feed on the living until their brains are destroyed.

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If, in Nosferatu, the narrative makes a link between the plague and vampires, playing on the cultural imaginary, epidemics were not perceived as a threat in 1968, but the apocalyptic context of radioactivity certainly was. Dracula’s elegance, midway between bourgeois and aristocratic, from Bela Lugosi to Christopher Lee, and his capacity for manipulating social relations to reaffirm his own power and feed on the blood of the living, is absent from these putrefying, twisted, bleeding and dirty corpses that move by mere instinct. Yet precedents exist, such as representations of Mr. Hyde in the successive film versions of Stevenson’s novel. However, Hyde is our hidden ego, lacking feeling, cold and calculating, and violent to boot, while the walking dead are beasts in a strict sense. They move due to an electrical instinct and only respond to simple stimuli such as noise, or the expectation of flesh.

Night of the Living Dead could be classed as a docudrama about the first night of the apocalypse, perhaps not too far removed from the Biblical tale, but with millions of Lazarus figures wandering the earth. The story, which falls within the context of fears that were reflected in US cinematography in the 1950s, highlights the human species’ practical capability for survival and its absolute dependence on technology. Meanwhile, it claims as its own the phrase homo homini lupus (“A man is a wolf to another man”) when trying to survive among supposed equals, in spite of the contention strategies of the state’s armed forces, which quickly break down into the violation of any notion of right and the total dominance of violence.

Night of the Living Dead, filmed in dirty, gloomy and sinister black and white, when color was marching toward absolute hegemony of the medium, is a cultural product of the Cold War. Here, the plague’s etiology is not taken into consideration, though the living, cannibalized by the dead, once dead, join their predators. If Victorian vampires abducted their victims and the curse turned them into waxy damsels or anemic youths, Romero’s walking dead are rotting Lazarus types who take over the world.3

Now enthroned in the pantheon of popular culture thanks to Romero’s genius and the everyday life he portrayed to depict the tragedy, the undead have become an icon of postmodern society. That society has also digested the phenomenon, once more imbuing it with meaning and, to a certain extent, shedding any critical dimension it had of late-twentieth-century north-American society. Yet many studies on the subject reference specific aspects of the political discourse inherent in zombie film and TV. Night of the Living Dead became a cult film and the departure point for a genre that would overflow the borders of the film medium to invade graphic novels, including that which inspired the series we are looking at, The Walking Dead, in the early twenty-first century.

On plagues, epidemics and other calamities

Epidemics, since the metaphoric reference to the plague in Nosferatu, have been a subject less visited than others in the entirety of the cinematography focused on the field of health, disease and healthcare in the twentieth century. Nevertheless, we can highlight several films for their quality or their success. Here are various examples. Elia Kazan’s Panic in the Streets (1950) is nowadays an interesting realist tale, likewise packed with metaphors and symbolism, bearing substantial ethnographic and historical value. It traces an epidemiological investigation into a classic outbreak in the port of New Orleans, originating from a human vector. Almost half a century later, Outbreak (1995) reflects the technical response and intervention protocols concerning an outbreak of hemorrhagic fever of a viral origin entering the US, a theme covered with more solvency in Contagion (2011). In Panic in the Streets (1950), the refer-

3 Romero’s fable has several sequels, in which the filmmaker used the walking dead to speak of survival in a capitalist society, such as in Return of the Living Dead (1978), where the living are entrapped in those cathedrals of consumerism, sprawling north-American shopping malls.
ence point is the plague and prevention; in the other two, the emphasis is on capacity for technological response to epidemic outbreaks. Contagion also stresses the importance of investigation in the streets, an aspect that was portrayed in the TV production And the Band Played On (1993), centered on investigations leading to the discovery of the human immunodeficiency virus (HIV).

Before Outbreak, and in the context of irrational fears of the Cold War with its epidemics of UFO sightings, to which Spanish weekly El Caso paid riveted attention, Robert Wise’s The Andromeda Strain (1971), seemingly an exercise in science fiction so as to remain politically correct, highlighted the problem of biological weapons and their more than probable confinement to installations on the margins of citizens’ view and control. Its most interesting aspect is its realistic portrayal of operational protocols in what were probably the first laboratories specialized in studying uncontrolled epidemic outbreaks. At the time of screening, no collective awareness existed, much less any “moral panic” (Garland, 2008), regarding any epidemic that was not bacterial in nature. That same year saw a minor cholera outbreak in Spain. In the quarter-century between The Andromeda Strain and Outbreak, epidemic risk from a virus became a more patent threat, albeit in limited circles, such as in the cases of the Marburg and Ebola viruses. This is a new model for limiting and curtailing risks, based on violent outbreaks, but modeled by political and rhetorical discourses on security. Despite its early confinement to specific behaviors and risk groups, HIV/AIDS signified the definitive awareness-raising on the coupling of epidemics and globalization, stoked even further in recent years by alerts regarding bird flu, influenza A virus (N1H1) and the latest Ebola virus outbreak.

Yet apart from these films in which collective terror arises from the “outbreak” of disease, the idea of the apocalypse associated to an epidemic is receiving unexpected film and TV development via the emergence of the figure of the undead. It is not by chance that Blade and The Walking Dead have evolved from two graphic novels in which viral infection is the major cause of the apocalypse, in a context in which the threat of biological war generated after 9/11 has fed into popular fears.

The three film franchises of Blade (1998) and its sequel, Blade: the Series (2006), stay within the classic blueprint of the vampire genre, though with more gore, a lot more sex and a production design that systematically employs the present world as a referent for the underworld of the vampire minority. A recent trend, illustrated mainly by various TV series, is to treat the living dead and vampires as a minority who manage to coexist with humans. This is the case of True Blood (2008–2014), Being Human (2008), The Vampire Diaries (2009–) and its spin-off The Originals (2013–), among others, but especially the caustic British miniseries In the Flesh (2013). This BBC series accepts the hypothesis of apocalyptic viral infection, which it defines ironically as “partially dead syndrome” (PDS) enabling, on one hand, an interesting treatment on managing a chronic disease, and on the other, a highly critical dissertation on the tolerance of difference in current British society.

Cannibal undead and human assassins

When the channel AMC announced the screening of The Walking Dead, critics were aware that among the series creators were Frank Darabont, considered one of Hollywood’s best scriptwriters; Greg Nicotero, the prestigious special effects creator, and Gale Anne Hurd, a successful producer. Another guarantee was that the idea and scripts originated from the authors of the homonymous graphic novel created by Robert Kirkman. This roll call meant the series would likely have a certain quality within a television panorama that had changed profoundly in recent years. The series has introduced new narrative languages in

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4 Nicotero’s first large project was, in fact, on a George G. Romero film, Day of the Dead (1985). He is considered one of the heirs of the tradition of creators of strange creatures, like Ray Harryhausen and especially Tom Savini, who he trained with.
relation to film, and what is more important, ones accessible to world audiences through the Internet, allowing broad swathes of viewers access to the production of genre that, in film, would be more on the fringe.

The Walking Dead’s genealogy no doubt includes both Night of the Living Dead and 28 Days Later (2002), but with nuances. In Night of the Living Dead, the cause of the dead’s resurrection is never clarified, but they are dead, while in 28 Days Later and in The Walking Dead the scripts mention an infection of a more viral than bacterial nature, which means that the zombies are not “resuscitated” but “transformed”, as with the idea of Partially Dead Syndrome in In the Flesh. Nevertheless, representation of the undead in The Walking Dead uses referents such as Night of the Living Dead rather than the image of a waxy adolescent as in the British series (closer to the adolescent vampires in The Twilight Saga, 2008–2012). The series dramaturgy is therefore far removed from the idea of a chronic illness, whether degenerative or not, but rather placed in a setting much closer to the original model of the resuscitated corpse, matching a culture that systematically practices thanatopraxis and embalming before burial.

Even so, by opting for transmission through biting, it harks back not only to vampires, but also to the cultural imaginary of rabies contagion, a topic that had significant cultural impact in the early twentieth century. It also evokes dementia leading to animalization, whose most obvious references in history are those associated with late-stage syphilis infection, or with alcoholism and epilepsy. However, the series goes beyond this, since it deals with a type of clinical decerebration, which governs maintenance of the most primitive phylogenetic structures in homo sapiens and which, curiously, is cured by physically decerebrating the zombie.

The path followed by The Walking Dead therefore clashes with the current evolution of the vampire genre, centering on post-adolescent bodies, or on versions that accentuate virility to a greater or lesser degree, such as Wesley Snipes in the saga Blade, or Amazons like Leonor Varela in Blade II, far removed from the classic manly style of Christopher Lee’s Dracula.

Although in the classic representation of the zombie in The Walking Dead, the referents to the Paris-based theater of Grand Guignol (1897–1962) are fairly clear, the series aesthetic, in faded, slightly dirty tones, under gloomy skies, tries to reinforce, at least in terms of landscape, a certain documentary air. This is probably because it is dealing with landscape. If in Night of the Living Dead the protagonists are the living dead, this is not the case of 28 Days Later or The Walking Dead.

According to García Novo (1989; 8–9) the term epidemiai had been interpreted like “visits overseas”, though he emphasizes that the title probably refers to “being caught unprepared”. Both definitions correspond very exactly to the fundamental themes in The Walking Dead. On one hand, the crisis the epidemic brings, in this case in its actual meaning, is skilfully narrated in the first episode. The plague surprises the protagonist, Rick Grimes, while he is convalescent in hospital, and from this unforeseen situation the plot arc for the first season develops, focused on the search for a vaccine and cure, leading them unsuccessfully to the Center for Disease Control in Atlanta. This first season, in reality a six-episode miniseries, is the most illuminating of all, because it illustrates the idea of the crisis, the unimaginable and, meanwhile, the hopeful itinerary of the quest for health of the founding group.

From the second season onward, the tone changes, on the assumption it is an out-of-control epidemic and that the forces that might have halted it have failed, leaving no alternative. In view of the infection’s characteristics, “clinical or therapeutic” solutions are going to involve forceful responses. For this reason, in the third season, Carol applies euthanasia and amputates a leg of one of the members of the group to stop the gangrene that has developed from an infected bite. At the time of writing in its fourth season, the duo made up of soldier Abraham Ford and Dr. Porter are offered as a hope for a cure, an argument for survival.

It is not the apocalypse caused by the “partially dead” and the search for a cure which have been key to the popular and academic success
The Walking Dead and the Collective Imaginary on Epidemics of this series, but the manner of portraying the development of those fighting against the undead. In most apocalyptic series (and in films such as The Road, an adaptation of the novel by Cormac McCarthy), as well as in the series we are looking at, the “good guys”, that is, the survivors of the human race who are fighting to save that heritage, evolve from perspectives we might call “democratic American” toward radically totalitarian and neo-fascist attitudes. Their view of the undead is fundamentally racist, with a seemingly unstoppable crescendo of violence. All of this leads to a collapse of values, generally justified as a form of safeguarding family values, in terms that are difficult to comprehend in Europe.

In The Walking Dead, the characters—especially Rick Grimes—evolve toward often clinical levels of paranoia. This could also be interpreted as what is known as a “psychic epidemic”, taking on elements of classic descriptions of folie à deux, or shared psychosis, as seems evident in Rick’s and Carol’s attitudes in the fifth season. So not only do we have the cannibal undead but also the transformation of the “good guys” into a band of serial killers whose paranoia urges them even to kill each other. So the play between the hell represented by “the other” and one’s internal hell is one of the more fascinating keys to the series.

The storyline resulting from this type of “psychic epidemic” highlights the massive use of military technology, emphasizing the high degree of identification of broad sectors of North American culture with the fetishism of firearms, including the crossbow. It appears this scenario is often presented cynically: surviving at all costs as a payoff for literally becoming killers, or, if you prefer, modern-day gunslingers in a new film genre that has infused the old forms of the classic western with fresh blood.

Marta Allué (2008) has written a great deal about survival in terms that directly contradicts its mode of representation in The Walking Dead. The plot line of the series, based on concentrationary literature and on a careful ethnography, is that survival is the product of social and cultural learnings, even in situations of maximum violence, such as surviving in extermination camps. Survival, defined as a practice, does not lead to any kind of pathology, but to the deployment of skills and the testing of these in order to resist. The root difference is in that it is not necessarily “the apparently strong” who survive, a nuclear argument when designing the protagonists of some series (in the case concerning us, Rick), but those who know how best to adapt to daily survival without necessarily being leaders or heroes. The best is not the one who dies, but the one who reaches the end. Yet this character is distrustful, given that “he comes to know what he has done”. Allué does not base her argument’s mainstay on a moral Christian model, a stance that would be overwhelmingly present in the heroes’ ideology and in the idea of redemption through death, another common theme in series scripts. To a certain extent, surviving means going unnoticed, but in The Walking Dead, if you do so, you do not survive.

The survival narratives that appear in the series signify a marked contrast. So, in some characters’ makeup, especially in the development of the protagonist Rick Grimes and in the moral coolness of his adolescent son, Carl Grimes, both appear as heroes, though often ruthless. Compared to them, Carol’s logic and common sense are much more closely aligned to the survival model Allué describes. At a certain point, she is forced to execute a girl who has become mad, just because she has gone mad, and under the circumstances, she endangers the other group members. Carol’s character is perhaps the most interesting. She represents a survival praxis based on systematic observation of the facts and on rational decision-making in extreme circumstances. This leads to her being banished for applying a measure that was inevitable in a situation without alternatives. The contrast between Rick and Carol, carefully managed by the scriptwriters, also links highly idiosyncratic US cultural contexts, where the weight of moral and religious discourse in the media underlines much of the scriptwriters’ work.

Wild men in the looking glass

Two decades ago, the anthropologist Roger Bartra (1992) published Wild Men in the Look-
ing Glass. The Mythic Origins of European Otherness, a compelling study on the imaginary of otherness in Medieval Europe, in which the endless greenwoods hid chimera and mysterious beings, wild men and women, and monstrous creatures. In the vastness of the Medieval forest, cleared land for farming and cities were spaces of light. In The Walking Dead—in contrast to the intensely urban 28 Days Later, and with the exception of the first season—woodlands, fields and copses straddling abandoned highways and railway lines are the setting for the walking dead. Their transformation turns them into beings who live in nature, occasionally shut into houses or warehouses they do not know how to escape from, and they walk day and night in search of what, we suppose, is their food. Instead of deserted cities, fields of undead. Replacing the idea of quarantine, the exclusion of the savages, or shutting the pathological into institutions, the survivors, the sane in The Walking Dead, must live enclosed. They live barricaded in refuges, in small redoubts, where they can dig in, condemned to foray out to replenish their water supply or stock up on food, moving outdoors at risk, like the Spanish troops holed up in army blockhouses in the Battle of Annual, surrounded by the hordes of the Rif. The world is no longer human: nature, the undead included, have taken over, and as if it were a new Middle Ages, the refuges are surrounded by theoretically impregnable walls, or, in the greatest of paradoxes, prison and its prisoners become a space of freedom.

The play of contrasts between the dangers of the epidemic that govern the natural world and the need to build spaces of exclusion is interesting from a comparative viewpoint. The typology is suggestive in itself: in the second season, the farmstead; in the third, the free prison compared to the Governor’s enslaved community, the railway station and its warehouses; and in the latest season, urban utopia, with links to the France-Ville in Jules Verne’s The Begum’s Fortune (1879), is seen as hygienic, as a blueprint for civil society which the group of barbarous survivors who accompany Rick and Carol must assimilate. They reach it through a kind of initiatory journey that is the result of choosing to take the sergeant and the doctor (once again, the hope of a cure) to their destination.

We do not know how the series will evolve in future. The latest season has focused mainly on the almost impossible rebuilding of civility for those who have been stripped of their theoretical humanity on their journey toward survival. On their odyssey through nature, their paranoia and profound distrust in human beings themselves have begun to spread like another epidemic. This situation stems partly from their incapacity to manage resources other than those of technological society. They are not country people; they depend on what remains in supermarkets. Even domestic animals no longer exist. Yet there is always gas for vehicles, and ammo to load the magazines of their assault rifles.

Conclusions

It is not a foregone conclusion that The Walking Dead, despite many filmic qualities, will join that cult group of series of the last decade. There is a lot of competition. Academic production on the series is in itself surprising, given that most of the elements it uses stem from a well-founded cultural genealogy, already dealt with in film, the roots of which delve at least as deep as European Medieval cultures. Even the plague, as such, is directly linked to the imaginary of modern and Medieval plagues, and the undead, to the living dead that populate folklore. Nevertheless, millions of viewers worldwide avidly watch the episodes as if zombies were a novelty. Such articles adventure numerous hypotheses, but perhaps it is simply the “it works” factor of audiovisual products—such a hard factor to define.

References

The Walking Dead and the Collective Imaginary on Epidemics

Angels in America, The Normal Heart and Positius: HIV/AIDS in TV Series

Aina Clotet and Marc Clotet, under the supervision of Bonaventura Clotet

Although the human immunodeficiency virus (HIV) and AIDS have been explored in TV series of a gay bent such as Queer as Folk (Channel 4, Showtime) and Looking (HBO), the fact is that, to date, they have only been examined more deeply in shorter formats. Such is the case with Angels in America, a miniseries produced by HBO in 2003, which narrates the spread of the epidemic in the midst of the Reagan era. It is also true of the more recent The Normal Heart (2014), also by HBO, a movie for TV that travels a little further back in time to describe the early years of confusion surrounding an unknown virus. Yet rarely has this infection been dealt with on television away from the gay stigma. One example can be found in the TV film Positius (2007) by Catalan channel TV3, starring two heterosexual women infected by the disease.

How does a society react to the threat of a new disease? And if that disease—apparently—only affects a specific collective? How long would a government take to respond? How would it manage the fear of the unknown? And once known, how does the stigma develop? How are your world and your surroundings transformed? Do your priorities in life change? To answer these questions that arise with the human immunodeficiency virus (HIV), we will analyze the North American fictions Angels in America and The Normal Heart, and the Catalan production Positius—the first, a miniseries and the other two, TV movies.

In both American productions, the stigma caused by HIV is mainly told through male protagonists, men who have sex with men (MSM), who, as well as fighting the disease, must also confront the social rejection generated by a disease associated with sexual licentiousness and homosexuality. In contrast, Positius portrays two heterosexual women infected by the disease. We will start by examining the American productions, since they occur chronologically in time, and lastly look at how the Catalan fiction has dealt with this terrible epidemic.

The Normal Heart portrays the early years of AIDS, a period in which almost nothing was known about what was initially branded the “gay cancer”, whose cause was a total mystery. The infection was only recognized when the patient developed Kaposi’s sarcoma, a cancer caused by a virus that produces purplish lesions under the skin, in the lymph nodes and other parts of the body.

Set between 1981 and 1984, the TV movie relates how society, the government (President Reagan having recently entered the White House) and the US medical sector decided to ignore the early spread of the epidemic. The film centers on a group of gay activists who embark on a campaign to call attention to this infection which apparently only affects gay men. The scriptwriter Larry Kramer used his own experience in New York in the early 1980s to write this TV film that won several awards in 2014, among them an Emmy for Outstanding Television Movie.

The miniseries Angels in America was developed shortly afterwards, in 1985. Reagan was still in the White House, but AIDS was no longer an unknown word, albeit highly stigmatized. The miniseries focuses on the story of five people (four men and one woman) affected by the disease in one way or another. The four men practice sex with other men, though one of them, Republican
and Mormon, is married with a wife. The production earned eleven Emmys and five Golden Globes, in each case including Outstanding Television Movie and Best Miniseries, respectively.

**Diseases from which the protagonists suffer**

Neither fiction deeply examines medical treatment of the infection, though Angels in America is somewhat more explicit on symptoms. Two of its lead characters, Prior Walter (Justin Kirk) and Lou (Ben Shenkman), are a couple until the former confesses he has caught HIV. When Lou questions the accuracy of the diagnosis, Prior Walter lists his symptoms: Kaposi's sarcoma, the presence of protein in his urine (from the effect of HIV on his kidneys), diarrhea and blood in his feces.

The other character infected is Roy Cohn (Al Pacino), a highly influential Republican who hides his homosexuality to stay in power. Cohn visits his doctor with a clinical profile of lesions from Kaposi's sarcoma, inflammation of glands in his neck, groin and armpits, oral candidiasis and fungus under his nails.

**Ignorance of the transmission routes**

Meanwhile The Normal Heart bases its medical viewpoint on the relationship that its main character, Ned Weeks (Mark Ruffalo), establishes with Doctor Emma Brookner (Julia Roberts). Brookner uses a wheelchair, having suffered from polio as a girl. For this reason she empathizes with the impotence her patients feel. However, the doctor is an exception in the TV movie. At a time when the immune system was “a real unknown” and the transmission routes of the disease were unknown, many doctors refused to see patients because of a fear of contagion. “They turned us away from four emergency rooms,” says a friend of Weeks one night when he turns up at his home with his boyfriend passed out in his arms.

In another scene, Weeks visits a hospital where several patients have been hospitalized because of the “gay cancer”, and where numerous posters warn him that he is entering a “contagious area”. When he asks about the lunch trays in the hallway, they tell him that hospital staff will not deliver the food to the rooms for fear of getting infected, the same reason the maintenance technician refuses to fix one patient’s TV set.

**Discovery of the virus that causes the disease**

In Angels in America, set in 1985, Cohn’s doctor can give his patient a more detailed explanation than Doctor Brookner can. By then, the virus causing the infection had been identified (in 1983, by scientists at Paris’s Institut Pasteur), and it was known that those infected underwent a drastic decrease in their white blood cell count. The series, however, does not accurately reflect the information that was known, as reflected in the explanation the doctor gives Cohn after telling him his diagnosis:

“Nobody knows what causes it. [This statement is false because HIV had already been identified.] And nobody knows how to cure it. The best theory is that we blame a retrovirus, the human immunodeficiency virus. Its presence is made known to us by the useless antibodies which appear in reaction to its entrance into the bloodstream through a cut, or an orifice. The antibodies are powerless to protect the body against it. Why? We don’t know. The body’s immune system ceases to function. [It would be more correct to say it gets weaker.] Sometimes the body even attacks itself. [In fact it is the virus that weakens the immune system.] At any rate, it’s left open to a whole horror house of infections from microbes it usually defends against. […] We think it may also be able to slip past the blood-brain barrier into the brain. Which is, of course, very bad news. It’s fatal in we don’t know what percent of people with suppressed immune responses. […] The NIH in Bethesda has a new drug called AZT with a two-year waiting list that not even I can get you onto.”

**Prevention and transmission routes**

“Do you think that this cancer is sexually transmitted?”. “I think it is, yes. Can I prove it yet? No.”
Through this conversation in *The Normal Heart*, Doctor Brookner asks Weeks, a renowned and polemic writer, to try to convince the gay community to stop having unprotected sexual relations. His efforts with a generation blinded by the ideology of sexual liberation, one which took them so many years of struggle to attain, are in vain. “The entire gay political movement is fucking,” he says. “Guys will become frightened of sex. They will lose our self-respect, that we fought very, very hard for.” Brookner’s discourse, moreover, loses force from the moment she cannot even assert that the infection is sexually transmitted.

Later it was shown that infection was contracted through blood, sexual relations and mother’s milk. Drug addicts, from sharing used syringes, hemophiliacs, through contaminated blood transfusions, and MSM, due to the nature of their sexual relations, were the first population groups affected. However, the infection was also transmitted in heterosexual relations. In fact, at one point in *The Normal Heart*, Brookner states that “Women have been discovered to have it in Africa, where it is clearly transmitted heterosexually”.

The stigma

Social rejection is doubtless the most difficult hurdle to overcome for characters in both fictions. Nobody knows where the disease comes from, not even the homosexual community itself, which in *The Normal Heart* even points to a possible “conspiracy to murder all gay men”, or questions “monogamy” as a possible cause of infection. Outside of their community, things are much worse. They have problems even hiring a venue for their association, the Gay Men’s Health Crisis (GMHC), and one of their members is warned that, if it came out that he belongs to it, his job at the Department of Health would be at risk.

The toughest situation, however, arises when a friend of the protagonists travels to Phoenix (Arizona) with his boyfriend to visit his mother before death. The pilot of the plane refuses to take off when he discovers there is an AIDS sufferer on board. When, thanks to another pilot, they finally arrive, the young man dies and the hospital doctors refuse to examine him for the cause of death. Because there is no death certificate, the undertakers and police will not come, so the deceased’s boyfriend and mother pay 50 dollars to a hospital attendant to remove the corpse from the hospital and they transport it in their own car. Once at the funeral home, they are forced to pay 3000 dollars to collect the deceased’s ashes.

In *Angels in America*, social acceptance of the disease has progressed very little. When the doctor tells Cohn his diagnosis, they have the following conversation:

- **COHN.** This disease…
- **DOCTOR.** Syndrome.
- **COHN.** Whatever. It afflicts mostly homosexuals and drug addicts.
- **DOCTOR.** Mostly. Hemophiliacs are also at risk. […]
- **COHN.** And what is my diagnosis, Henry?
- **DOCTOR.** You have AIDS, Roy.
- **COHN.** No, Henry, no. AIDS is what homosexuals have. I have liver cancer.

So Cohn is stating that the version he will make public regarding his state of health is that he has liver cancer, since he cannot admit he is suffering from a disease attributed to homosexuals. If he did, he fears he would lose all his power and influence.

A lack of support from the public authorities

The *Normal Heart* also shows the fierce struggle the activists take on to achieve social and financial support from the public authorities. For example, it took the GMHC 14 months to gain a meeting with the mayor of New York, and in the end, he did not show up to the meeting. When, some time later, they receive financing from the council, they are given strict instructions not to say where it came from. The justification that Weeks receives from the council is: “I don’t think we can afford to make so many enemies.”

From the White House, the only attention they receive is from one of the president’s advisers who, once in the meeting, makes it clear that his sole interest in the meeting was to find out per-
ersonally whether the infection can be transmitted between men and women. Weeks, beaten, can only answer that, though he cannot guarantee it, in theory, the affliction seems only to affect the homosexual community.

For her part, Doctor Brookner also maintains her personal crusade to ensure that study of the disease receives government funding. She accuses the government of spending more money on “investigating seven deaths from Tylenol” (a drug whose active ingredient is paracetamol) than on HIV, and of refusing to cooperate with the French to “steal a Nobel Prize”.

The allusion to the dispute for the Nobel Prize is not anecdotal. The virus was isolated for the first time in 1983, by investigators at the Institut Pasteur in Paris. Virologist Luc Montagnier’s team identified a new class of human retrovirus, and indicated it was the cause of AIDS. Montagnier sent samples to the American virologist Robert C. Gallo, who confirmed that HIV was the cause of AIDS, and helped develop the blood test to detect it. Nevertheless, the 2008 Nobel Prize for Medicine was awarded to Montagnier and the French virologist Françoise Barré-Sinoussi. Gallo had confirmed the link of HIV with the disease, but the French were the first to isolate the virus.

The Normal Heart finishes in 1984. The final credits explain that Reagan did not mention AIDS in public until 1985, when he promised that research against the disease would have “maximum priority” and that 126 million dollars would be earmarked for it in 1986. The film denounces that this figure was reduced to 85.5 million, an insufficient amount to cover the costs of a pandemic that, by the end of that year, had caused 24,559 documented deaths in the US.

The case of Positius

In Catalonia, the disease has occasionally appeared in many TV series, though few productions have had HIV as their central theme. In contrast, the TV movie Positius, produced by Ovideo for TV3, written by Aina Clotet and Àlex Mañas, and directed by Judith Colell, did place the disease center stage in the script. The story focuses on the disease’s social aspect. One of its objectives was, precisely, to destigmatize the disease and distance it from prejudice.

Its main characters are two women who are carriers of the virus, but very different to each other. Vero (Montse Germán) is a well-to-do graduate of around 38, who seems to have normalized her illness among her friends and inner circle. She does not tell everyone she meets, but neither is she ashamed of her status, and she seems to lead a happy life. In contrast, Gloria (Mercedes Sampietro) is a woman over 60, from a low socio-cultural level, who keeps the disease an absolute secret. She lives with her son Rober (Roger Coma), who is likewise unaware of his mother’s status. Both women only meet the odd time during the film, in hospital, and in the NGO where they both seek shelter.

The TV movie starts with a birthday celebration, bringing together ex-students from Vero’s university days after 20 years. This is where Vero meets Xavier (Pau Durà) again, and everything she thought she had under control comes tumbling down. Xavier has just separated from his wife and has a son, but the passion and love between them reignites immediately. In their first sexual encounter, Vero does not tell him she is HIV-positive because she thinks that, since they use protection, it is unnecessary. We then see how, on successive occasions, they always use condoms and she becomes increasingly concerned about the situation as her relationship develops and she starts falling in love. Finally, urged on by her best friend, she decides to talk to him. This is a key scene: a conversation lasting over ten minutes that develops into an emotional roller-coaster between the two characters. For Vero, it is clear that the fear and anguish hold the same weight as the need to communicate (it has taken several weeks for her to feel strong enough to take this step). Xavier, for his part, starts by listening understandingly, but little by little his face transforms from “apparent understanding” to “utter panic”. He does not understand how she could hide something so significant, which directly affects him. Meanwhile, Vero does not stop repeating that she “has always protected him” and that she “needed to feel safe with [him] in
order to share [this knowledge]”. The scene lets viewers share and understand the fears that this disease entails: fear of rejection for the sufferers, and fear of contagion (often the result of massive disinformation) in the case of the sexual partner. The scene comes to a tragic end for both, terminating with Xavier’s exit, leaving Vero broken and alone.

In contrast, Gloria, the other protagonist, gets a job offer to look after the daughter of Belén (Aina Clotet). Gloria’s lack of education and knowledge cause her to make excuses and turn the job down, afraid she will infect the girl just by contact. Worried, Gloria goes to visit an NGO (pretending she has an HIV-positive friend), where finally they inform her and help her understand that she “cannot infect anybody just by touching them”. In the end, Gloria is able to accept the nannying job and the relationship with the little girl becomes increasingly closer until the girl becomes her reason for living. Unfortunately, Belén ends up finding out that Gloria is HIV-positive. With no explanation, she immediately forbids her from seeing her daughter. Gloria falls into a deep depression, goes off her medication and is admitted to hospital. It is Gloria’s son, who until that point had seemed a distant figure and did not know about her illness, who becomes her greatest support.

Conclusions

Analyzing all three productions, we can see that they all practically repeat the same concepts: disinformation, lack of prevention, stigmatization and scarcity of resources from the authorities to fight against the disease.

In the twenty-first century, AIDS continues to be a reality among us. Nowadays, thanks to the huge advances made in recent years, we can chronicle the disease, but at an untenable long-term cost for public health, and with a certain toxicity for the patient.

Science is progressing in great leaps to cure AIDS in infected sufferers. Research seeks to eradicate HIV from the organism so that lifelong treatment becomes unnecessary. Highly promising therapeutic vaccine models exist, which, combined with other strategies, will lead to a cure for the infection. The foremost laboratories worldwide have set the goal for achieving it in 2020. But until this occurs, AIDS remains a reality. The stigmatization has not disappeared, but young people live “as if it didn’t exist”, leading to a fresh peak in cases. In these moments of crisis, when resources are increasingly limited, we have to extend the concept of “corporate social responsibility” not to apply just to companies, but to people individually. If each of us do our bit, we can help to end this pandemic.
Nip/Tuck, Grey’s Anatomy and Plastic Surgery

Maria del Mar Vaquero Pérez

Both productions could be considered to be the launching pad for two meteoric careers: producers Ryan Murphy and Shonda Rhimes. Today they are two television industry heavyweights. The former sprang to fame in 2003 with Nip/Tuck, a polemical vision of plastic surgery, shown through the lives of its two controversial protagonists. Along with The Shield, this program brought the cable channel FX into the orbit of series addicts. Years later, he would again work for this channel on American Horror Story. Shonda Rhimes’s career took off in 2005 with Grey’s Anatomy, which still keeps audiences in their millions glued to the screens of free-to-air channel ABC. Its success has enabled the channel to open a production company for TV series (Scandal, How to Get Away with Murder), now dubbed Shondaland.

It might seem obvious to begin this chapter dedicated to plastic surgery in TV series by mentioning the fascination that doctors’ private and professional lives have always held for viewers. Every aspect relating to medicine, to the work and coexistence of health professionals in that independent city that a large hospital constitutes are fertile content. Such aspects include the dramatic change of lifestyle a disease’s appearance brings about, but also the analysis of symptoms, like clues in a mystery movie, that lead to uncovering the diagnosis of an illness. Witnessing the progressive deterioration of a character suffering from a degenerative disease, or –let us say it– the moment of death itself, all of these are excellent storylines for thousands of scripts. They contain enough elements of tragedy, drama, anecdote and human overcoming of challenges to attract viewers.

The permanent contact of doctors with life, suffering and death make them the ideal heroes in many stories. These include both their own and those resulting from their professional vocation, which sometimes leads them to sacrifice personal or family life. Similar are the stories of their involvement with family members and patients, stories of the empathy inherent in their profession, meaning they share the suffering and recovery of the sick. There are stories of interpreting the patient’s death as a personal failure, or as proof of the uselessness or insufficiency of their knowledge. And even –why not?– stories of the doctor who acquires more of a human dimension when he or she switches roles and becomes a patient. This is a fascinating viewpoint, which portrays how difficult it is to take (as the saying goes) one’s own medicine.

Medicine in film has given us marvelous stories in every imaginable genre and setting. We have seen doctors starring in romantic movies and who, prompted by love, seek a cure for their loved one. Or else they end up falling in love with the patient they cure. In war movies of any period, doctors often battle with few resources but enormous inventiveness. In natural disasters or epidemics, they lead the survivors toward a new dawn. In crime films, they reveal the best of a little-known specialization such as forensic medicine. There are innumerable stories more. It is tricky to find a medical specialization that has not been dealt with on the silver screen.

As if this were not enough, as series developed, TV let viewers get to know the doctor starring in a storyline, and to share his or her de-
velopment and dénouement. Furthermore, viewers could partake of the professional’s daily life in each episode, experience the adventures that so attracted them one after another. With every weekly broadcast of her or his work, they shared his or her achievements, failures and affections, against a backdrop of recovery, loss, overcoming odds, frustration, life, and even death. Medical television series have encouraged more than a few professional vocations, increasing student numbers in medical faculties, attracted by the daily adventure of this profession.

I think this reminder is apt so as to be aware of the scant treatment of equal depth and content the specialization to which we dedicate this chapter –plastic, reconstructive and aesthetic surgery– has received in film and TV. I know some people would say that this is not so. We are used to seeing stars undergo changes in appearance. It could be so an actor can replace a colleague in a long-running series without altering the storyline or the central characters in the plot. Or maybe the character has a serious accident, or survives an assassination attempt that disfigures him or her, and must return with a fresh face to take revenge. These are recurring themes on-screen. This is undeniably true, and is no doubt the first notion that pops into our mind regarding plastic surgery. Yet outside of this easy script resource –a rather surreal concept reflecting none of the reality of the specialization– what does the broader public know about what plastic surgery consists of when given its full name: plastic, reconstructive and aesthetic surgery? How has TV fiction portrayed this specialization in series on medical themes? Have the fictional characters approached the plastic surgeon’s image as a doctor with the same dimension as a health professional as has been fomented for other specialists?

Frequently, plastic surgery and its professional practitioners only inspire frivolous plotlines or embody characters lacking the basic ethical principles that govern the doctor-patient relationship. Is this the fault of scriptwriters who are ignorant of the specialization’s content or the fields of interest it comprises? Or is it a deviation from reality that means that, though the scriptwriter perfectly understands what a plastic surgeon may do in his practice, he focuses on his facet as a creator or recoverer of beauty as the sole thing that holds interest in fiction? Or is it that plastic surgeons ourselves have not known, been able or wished to demystify that image that portrays us as the most enviable of stars?

The answer is surely a combination of all of this. Though there are few, if barely any, positive examples we can point to of this specialization on-screen, we will at least aim to reflect real knowledge of the specialization and try, by demystifying the stereotype, to reveal the true importance of what plastic surgery and its practitioners offer patients and the other medical specializations.

A little etymology and history

Plastic, reconstructive and aesthetic surgery. This is a long name for a broad medical specialization which is nevertheless most often abbreviated to plastic surgery. It is, furthermore, wrongly associated with just half of its content: aesthetic surgery. This would be understandable in the context of the broader public. However, it is unfortunately also the case among many medical professionals, who remain ignorant of everything this specialization encompasses and the services it can offer. Let us look more closely at them.

Plastic, reconstructive and aesthetic surgery is the medical and surgical specialization concerned with correcting any congenital, acquired, tumorous, or simply regressive process requiring repair or repositioning, or which affects bodily form or function. Its techniques are based on transplanting and mobilizing tissues using grafts and flaps, or even implanting inert material. In its most recent advances, it also employs complete units of donor tissue, such as limbs (arms, hands, legs) and the covering of the face.

The full content of plastic surgery encompasses two fields of action. The first is reparative or reconstructive plastic surgery. It seeks to restore or improve the function and physical appearance of injuries caused by accidents and burns, in skin diseases and tumors, along with the tissues beneath the skin. It may correct congenital anoma-
lies, mainly facial, or on the hands or genitals, or else anatomical defects caused after an oncological surgical resection. Then there is aesthetic or cosmetic plastic surgery, which treats generally healthy and emotionally stable patients. Such surgery makes alterations that, while not constituting pathological processes in themselves, cause a deterioration of health to the extent they interfere with people’s physical and psychological wellbeing. So its aim is to correct differences from aesthetic standards or the effects of ageing.

A plastic surgeon, to use his or her shortened title, may be concerned with repairing congenital malformations, treating and operating on burn victims, reconstructing any anatomical defect, carrying out surgery by hand, conducting microsurgery, re-implanting or transplanting limbs or faces, and performing aesthetic surgery. From head to toe. In the words of Dr. Raymond Vilain, the plastic surgeon is, in fact, “the last general surgeon”.

Concerning the name’s etymology, “plastic” stems from the Greek plastikos, which means to mold or transform. So in its entirety, plastic surgery is aimed at aesthetically designing bodies through remodeling to improve them, whatever the reason for surgery, or to make them more beautiful. The plastic surgeon acts thus. She or he seeks harmony, beauty and adaptation to aesthetic norms and functionality. This is independent of that separation into two activity fields, which is demarcated, in fact, by society and health systems (public healthcare and private insurance companies), which thereby attempt to limit the coverage of care intervention costs.

It is not just etymology that unites the functions of plastic surgery but also its documented history. Both the Edwin Smith Papyrus from Egypt (3000–2500 BCE, according to Breasted’s studies) and the Sushruta Samhita (“Suṣṛuta’s Compendium”) from India (500 BCE) document nose reconstruction. In that period the nose and ears were considered to be appendages conveying reputation and respect. So it was common to amputate them as a punishment against criminals and defeated peoples. Rewards were even paid for every nose and ear delivered. Even nowadays we still use the frontal flap Sushruta described to reconstruct the nose, which is known as an Indian flap.

Yet no doubt it was World War One (1914–1919) which caused plastic surgery to develop as a specialization. A huge number of soldiers were wounded by shelling and burns, as a result of which their bodies and faces were disfigured. So professionals had to be trained and medical centers specialized in surgical reconstruction created, both in Europe and the US, where this specialization was not recognized. It remained more or less associated with maxillofacial surgery for many years. Then in the Second World War (1939–1945), plastic surgery’s field of activity was expanded and it began to appear as an independent specialization. Dr. Archibald McIndoe developed (what for the period were seen as strange) transfers of healthy tissue to damaged areas, using pedicle flaps. These enabled many aviators who had been disfigured by fire to abandon the isolation to which they had been condemned as monsters. Medicine had certainly saved their lives, but at the cost of depriving them of employment or social life in the community, and leading in the worst cases to suicide. So McIndoe’s innovation thus lessened their suffering, reincorporating them into acceptable social and aesthetic norms.

The Spanish TV series Canal Historia and Odisea offer episodes on Dr. McIndoe, using period photos and the real voices of the veteran protagonists themselves to tell the stories of the young pilots in the Allied air forces he treated. When their bombers, loaded with large amounts of highly inflammable fuel crashed, the aircrew were consumed in huge blazes, from which they occasionally managed to escape alive, though with faces and bodies totally charred. Survival was a goal, but afterwards, tortured by their appearance, they needed their faces and hands to appear and function more or less normally again. They wanted to feel like accepted members of that society which, while respecting them as heroes, shied away from their disfiguration. Many were between 17 and 21 years old. Thanks to Dr. McIndoe’s innovative techniques of the time, these men tell how the correction of their disfiguring became a virtue. McIndoe founded
his Plastic and Maxillofacial Surgery Service at Queen Victoria Hospital in the village of East Grinstead, Sussex, England. Here, people got used to seeing and accepting his patients on the street, in local pubs, and even in London itself. They would carry their pedicles like small trunks that transferred tissue from their abdomen to the arm, from there to the shoulder and then to the face, finally becoming a new nose, cheeks or chin. During the time this process lasted, the patients and those around them saw how these disfigured faces were gradually conforming to a normalcy accepted by all.

The patients who lived there, sometimes for three to four years, and underwent 20–30 operations, managed to save not just their lives but also their minds thanks to plastic surgery and Dr. McIndoe’s approach and psychological work. Several ended up marrying the nurses who cared for them. They even formed a club, The Guinea Pig Club, which over its more-than 60 years of history brought together over 650 members. Years later, its survivors and their descendants continue to meet to honor their “creator” and raise a few pints to him while singing the anthem they composed in his name. The light-hearted lyrics go:

“We are McIndoe’s army,
We are his Guinea Pigs.
With dermatomes and pedicles,
Glass eyes, false teeth and wigs.
And when we get our discharge,
We’ll shout with all our might:
Per ardua ad astra [*Through adversity to the stars*]
We’d rather drink than fight…”

Knowing all this inevitably leads one to reflect. It is odd that both the early plastic reconstructions described in written historical documentation, and the main milestones leading to the creation and development of plastic surgery as a specialization, linked the components of material, functional and aesthetic reconstruction so intimately as a basis for a person’s social acceptance and reincorporation into society. Yet nowadays, it is customary to observe how society has generally separated the aesthetic and reconstructive elements into two clearly differentiated facets of medical practice. These are developed in contrasting environments, for likewise dissimilar purposes. They are even undertaken by separate medical professionals.

**TV fiction and plastic surgery**

To move on from plastic surgery’s noble and historical facets to analyze its evolution in TV series involves a search. However, we find little material worthy of mention, because as far as I can recall and trace, few TV series, whether on medical themes or not, include a character having this specialization. Perhaps the most famous in recent years are doctors Sean McNamara and Christian Troy in the series Nip/Tuck, and doctors Mark Sloan and Jackson Avery in the series Grey’s Anatomy. We would like briefly to present these series to those viewers who have not watched them, or who have heard of them at some point but do not know them well.

*Nip/Tuck* was a series that aired from July 2003 to March 2010 on the American cable TV network FX Networks. It ran for six seasons and is considered an innovative TV product for its time, because of the subject it tackles and because it gave the language of TV series a filmic style. Classified as a drama series, it won the Golden Globe for best in its category in 2005. Already, in 2004 it had won an Emmy from the US National Academy of Television Arts and Sciences (NATAS), for Outstanding Prosthetic Makeup for a Series.

The storyline follows the life and work of two plastic surgeons, Dr. Sean McNamara, played by the actor Dylan Walsh, and Dr. Christian Troy, played by Julian McMahon, who run a private clinic first in Miami before moving to Los Angeles to set up their practice in Hollywood.

In the series, these professionals’ qualifications and practice is in fact merely an excuse to explore one of the most polemical subjects on American television through the self-destructive nature of its characters, true both of the starring doctors and their patients. Furthermore, it dealt with topics that were not habitual on the medium or in the US, such as drugs, abortion, homosex-
uality, transexuality, sects, personal ambition and the constant search for pleasure and money. It portrayed a lack of personal or medical ethics, and depicted lives dominated by envy, stress, lust and even crime. All of this doubtless earned it significant criticisms from more conservative sectors, both in the US and other countries where it aired.

Grey’s Anatomy is a medical series from the US network ABC, which began in March 2005 and is still on air. It takes its name from the renowned treatise on human anatomy, *Henry Gray’s Anatomy of the Human Body*, better known as *Gray’s Anatomy*, a basic textbook for training US medical students published in 1958 by Henry Gray. So it plays on his name and Dr. Meredith Grey’s, the series’ central character. It won a Golden Globe for Best TV Drama Series in 2006 and has garnered a total of 38 nominations for the Emmy Awards in different categories (script, actors, direction, etc.), of which it has won four further awards.

The series is set in Seattle Grace-Mercy West Hospital, tracing the professional development of different medical specialists whose lives cross the protagonist’s. The series viewpoint is interesting because it focuses on the life and hopes of the resident medical interns who join the hospital to train as future specialists. There is tough competition between them, but also passion not only for medicine as a profession but for the value of patients’ lives.

For the subject concerning us, we look at two characters who, while they began as guest stars (conceived as occasional appearances in specific episodes), gradually gained prominence and became part of the core storyline, essential for the series’ development. They are Dr. Mark Sloan, played by Eric Dane, and Dr. Jackson Avery, played by Jesse Williams.

Series creator Shonda Rhimes seems to have conceived a fiction that offers a voice to intelligent women who compete with each other. To do so she devised a medical setting based on the impression she got when over a period she became obsessed, along with her sisters, with watching surgical operations on the Discovery Channel. She was surprised that the surgeons, while they were operating, talked about their personal lives, relationships, families and hobbies, even their money worries—all the while opening up and cutting into their patients’ bodies.

So these two TV series, with quite different takes on medicine and doctors, were both hugely successful and on air for a long time. By focusing on characters who are plastic surgeons, we will elucidate how they portray this discipline in TV series. Does the educational tone and appeal for the wider public, which every TV show strives for, manage to convey a faithful or at least realistic image of plastic, reconstructive and aesthetic surgery? Do they portray the lives and professional dedication of these specialist practitioners?

### The plastic surgeon: hero or villain?

In its time, Nip/Tuck was startling for its careful aesthetic, apparent right from the slickly designed opening credits accompanied by its theme song, Engine Room’s *A Perfect Lie*. Since the credits and theme song are brief, we are plunged into the atmosphere in which the story will develop: aesthetic surgery. The discipline, by cuts and stitches, can recreate those perfect bodies—represented in the credits as cold, identical, beautiful but static mannequins without life or personality, and still semi-packaged—while the lyrics croon:

> “Make me beautiful,
> A perfect soul,
> A perfect mind,
> A perfect face,
> A perfect lie.”

At first, it seems viewers are being offered the same view as ever—beauty as little more than an end. Yet patience will reveal more. Its central characters are two plastic surgeons specializing in aesthetic surgery who have been friends since youth. As we mentioned in the introduction, “aesthetic” and “reconstructive” are two medically inseparable facets. Aesthetic, like reconstructive surgery, rebuilds bodies and fortifies minds. From this viewpoint, the series seems to promise to center on one of the few branches of medicine excluded from any health policy, since it covers
content that is not considered vital. It would even seem a good idea to publicize aesthetic surgery as something that is not limited to artists or millionaires. It would be beneficial for viewers to know what can be done for patients to feel good about themselves and in their surroundings, to overturn myths and, somehow democratize access to the specialization.

The program starts in the consulting room of doctors McNamara and Troy while the lights go on in corridors, waiting and recovery rooms, and in the operating theater. They reveal a blend of clinical setting with the most spectacular, innovative decor imaginable, where elegance and a five-star air predominate. It is a vision in which, furthermore, a fast change in tempo have us abruptly suspecting that the entire medical atmosphere will be nothing but glamor. It seems we will be watching the same sort of program as always: will it end there, as usual?

Dr. Troy is attractive, sexy, single, a womanizer, narcissistic and a less-brilliant surgeon than his partner, though he is an excellent public relations man. Dr. McNamara is less attractive, married with three kids and the better surgeon of the two. Following the traditional, “good cop/bad cop” setup, Troy is the dark side while McNamara represents firm convictions.

Thus, the premise is set up and the story begins, with episodes that each bear the name of the patient operated upon as a central theme. And at the beginning of each episode, the doctors always ask the same question: “Tell me what you don’t like about yourself”. It is a good line, but too simple and even risky for initial intercommunication with the patient in a consultancy of this type. The problem gets worse, moreover, when we observe that none of the patients seems to present problems or pathologies typical of a plastic surgery consultancy that might be called conventional. Each patient is increasingly strange or unhinged. This confirms our initial fears. In fact, the series opts to portray the frivolous side of the specialization. I would say it is quite unreal and even illegal on many occasions.

A plastic surgeon who undertakes aesthetic surgery is not the “achiever” of everything his patients want to do with their bodies. Even if Dr. Frederik McLorg defined the specialization as “a surgical discipline that resolves problems”, we also said that aesthetic surgery treats healthy and emotionally stable patients. But the truth is, none of those on Nip/Tuck seems to be so. Added to this, with every episode, the personal storylines of the main characters get increasingly tangled. When the whirlwind of their lives careers into a labyrinth of personal perversions and criminal underworlds in which no averagely conventional situation appears ever to have existed, or which could not be found in other crime series that do not need a medical setting, the series starts to head rapidly downhill, especially in the final three seasons, until its demise became inevitable.

Why did the scriptwriters choose that profession and that surgical setting to present two such vile and tormented characters? It is difficult to know, but I believe it was thoroughly unnecessary. Do they contribute anything to our aim to see if aesthetic plastic surgery appeared for the first time as a central theme in a television series? Personally, I do not think so. On the contrary, beyond what could be an attempt to shine light on certain themes that also fall within the sphere of this specialization (surgery on transsexualism, the effects of morbid obesity and little else), the rest is the same as always: scars that appear to vanish as if by magic, body remodeling carried out using liposuction, and surprisingly fast recoveries after surgery. Nevertheless, they try to give a feeling of authenticity by introducing intra-operative shots of cuts, visible wounds, blood, fat that is extracted in buckets from patients’ bodies, and so on. All of this panders to the morbid fascination of viewers, watching with divided attention while eating dinner. In the end, nothing different or of value occurs to reveal the positive side of aesthetic surgery or to portray it in a realistic way. Even the patients who seek to recover their faded beauty or youth fall into addiction, seeking surgery as their sole form of survival and showing the most disastrous image possible to viewers.

The surgeons operate without masks, making surgery seem simple and easy while calculating their profits. A mini-bar is on display in the consulting room, while the doctors’ coats

Nip/Tuck, Grey’s Anatomy and Plastic Surgery

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are not even white but a strange tone of blue to match the decor. The doctors immediately lead their conversation with patients into personal territory. They insinuate or leave the field open for their female patients to make sexual insinuations in the consulting room. Are these doctors different to others, or are they making an effort not to seem like doctors in front of their patients? This is what happens when one wants to convey the idea that plastic surgery, at the end of the day, is not medicine or even surgery. One should not scare the patients. This goes beyond a doctor-patient relationship, into commercial territory, trivializing an operation's risks, or pretending that the patient's wishes must be served at all costs. We even wonder why plastic surgeons on-screen kiss their patients goodbye instead of offering a friendly but respectful handshake.

Leaving aside detective-style plots and situations that are far removed from these plastic surgeons' professional practice, we might even accept some degree of rivalry between colleagues, professional jealousies, or even some small stratagem to become the patient's favorite. These things might be seen to a certain extent typical of medical competition and the quest for professional excellence. Viewers might even forgive them such striving after perfection that every plastic surgeon carries inside. Not in vain did even Dr. McIndoe, mentioned in the introduction, say that in his work he felt God's presence descending into his right arm. But doctors McNamara and Troy take all this to the limits of deceit, jealousy and destruction. Neither do they seem to have much empathy with their patients. Sometimes they even clearly make fun of their complexes. McNamara, though we noted he is firmer in his personal convictions in early episodes than his partner, allows himself to be swayed in the quest for the only goal his consultancy pursues: money and success at any price. Troy, who adores female bodies so much for his own pleasure, creates beauty in his patients so as to then seek sexual relations with them. He is, moreover, profoundly misogynistic, scorning and mistreating women.

What is interesting at the time of writing is the sixth season's opening episode, in which a narrator tells us how in 1987, after the infamous Black Monday crash, a new financial golden age was born, and along with it, a new industry, the luxury industry. Newfound wealth coupled with easily available credit opened the door to vanities and excesses once reserved for the rich and famous, among them, plastic surgery. The "new must-have status symbol" was a perfect body. In this narrator's words: "compliant thighs and titanic tits". At that money-earning peak of offering both the possible and unattainable, McNamara and Troy rub their hands at the profits they earn with each patient. They enlarge their consultancy, furnishing it in luxury, and spend endless amounts on cars, yachts and the high life, thereby marking their professional status in a medical specialization very different to others. It seems to allow plastic surgeons to earn huge sums of money very easily. No stress can be seen during surgery. They merely tote up their earnings for each operation. Yet when this fairytale ends and the international credit crunch hits, the operations decrease drastically as do their earnings. It is tough to maintain the world they have created, and even tougher to appear to be doing so. This is where the financial stress seems to turn these doctors human, and they start to feel anguish and stress they have never shown in the operating theater.

Are they a special case? Unfortunately, for the series creators it seems not, because when another colleague joins the firm for an episode or a season, we assume either "birds of a feather stick together", or that the scriptwriters do not appear to believe anybody can practice this specialization with a modicum of ethics or medical professionalism. For example, in the first season, Dr. Merrill Bobolit, played by Joey Slotnick, showed fewer scruples than the central characters and is able to undertake illegal operations, continue operating after losing his license and use anesthetic gases as a drug. Generally, any other plastic surgeon who enters McNamara and Troy's consultancy is the same. They all seem to link their profession to a disproportionate quest for fame and money, and to a total lack of scruples to achieve them.

Beauty, success and money seem to be the ideal in plastic surgery, at the hands of handsome
young doctors like Dr. Troy, who throw out lines like “Appearance is everything”, “Beauty is happiness, beauty is power, beauty is confidence”, or “Going against established beauty is to ignore the world in which we live”. When these ideas are stirred into such a risky fictional cocktail, I firmly believe this reflects poorly on the reality of plastic surgery. According to such tenets, this profession does not merely implicitly espouse the cause of money and success for surgeons and patients, but also flouts it ostentatiously. So these professionals forget the aims on which the practice was founded, the work of its pioneers, and everything the practice can achieve, not just in aesthetic surgery but in collaboration with most other specializations in a large hospital.

Despite Nip/Tuck’s success –more closely linked to its slick photography, morbid fascination with excessive hyper-sexuality and the introduction of extreme themes– it does not help at all to present the reality of plastic surgery. Rather, it completely distorts its governing foundations while promoting the most fictitious and unreal stereotype of plastic surgery specialists. Medicine and the specialization operate as a mere excuse in which to set the storyline and increase the morbid excitement of their patients’ increasingly extravagant requests. In narrowing the search for more appropriate sensitivities to the plastic surgeon’s work, there is more joy in the treatment given to the specialization in Grey’s Anatomy. The program’s plastic surgeon is Dr. Mark Sloan. Though we might expect little from a plastic surgeon who, predictably following the jaded stereotype of TV fiction, is the most attractive doctor in the hospital, and is dubbed by his female colleagues “McSteamy”, in some episodes he represents plastic surgery’s contribution much more faithfully. In the series we see cases of facial reconstruction after traffic accidents, micro-surgery, reimplants and children with birth defects. Dr. Mark Sloan’s work includes far more than just aesthetics. It seems the program wants to introduce us to plastic surgery’s more useful side, including collaboration with other specializations.

However, it does call attention to the lack of attraction that the surgery he conducts seems to hold for the residents in training at Seattle Grace Hospital. They generally refuse to participate in surgery with Sloan while they fight energetically to attend, even just to observe, in any other specialization’s operating theater. Is this a subtle way of saying that what plastic surgeons do is not important? Is it a secondary specialization to choose to learn? Dr. Sloan is hard-pressed to attract any resident who wants to follow his work, and when he does find someone, he invites them to participate not in his team but in what he calls his Plastics Posse, to the embarrassment of the resident selected, who sees no special honor in it, rather a means of removing them from true surgery. This is a curious viewpoint, since in Spain, for example, the specialization of plastic, reconstructive and aesthetic surgery is every year more in demand by recently graduated doctors who have passed the MIR exam (for Resident Intern Doctors). Training places are quickly occupied by students with the best academic records.

It is a shame that in this series too, what is sometimes seen as a small glimmer of recognition toward the discipline of plastic surgery, or of publicizing the specialization’s novel and interesting aspects, ends up being lost in the banality of the character of the plastic surgeon. He seems friendly, but is never a leader among his colleagues who have other, better recognized specializations. He ends up once more being the good-looker, scorned and superficial, who easily performs less important operations. Without have taken advantage of the whole range of options the specialization might offer in a series such as Grey’s Anatomy about a large hospital, Dr. Sloan, who first appeared in the third season, was dropped from the series in the ninth. His place was taken by Dr. Jackson Avery, the only surgical resident who became Sloan’s protégé, and to date he seems to uphold the moral values and medical practices common to the other specialists. At some point it is revealed that his choice of plastic surgery may have been consistent with his good breeding. Not for nothing is he the grandson of one of the country’s most reputable surgeons. His family owns an immense fortune, thanks to which they are patrons
of one of the country’s most significant medi-
cal prizes. Nevertheless, he seems to maintain
a straight professional path while, like Sloan, he
tries to attract one of the new residents to the
Plastics Posse. Such sound professional judg-
ment by Dr. Avery seems to have shrunk his
participation as a specialist and the presence of
pathologies typical of his specialization in the se-
ries. Meanwhile, given the show remains on air,
we hope for plastic surgery to feature once more
on the small screen at some point. And if not
portraying it better, at least it may have the same
degree of reality, professionalism and interest as
the other specializations. Perhaps Dr. Avery will
manage to attract one of the many female doc-
tors starring in the series into his specialization.
This would shatter another myth that only men
work as plastic surgeons, above all in aesthetic
surgery—a specialization belonging to men who
sculpt beauty in women. There is scant need to
recall the current growing dominance of women
in medicine, in Spain and worldwide. In this sec-
tor as in others, reality takes one path while fic-
tion takes another. A woman surgeon in the con-
sulting room would not perhaps offer so much
morbid fascination when creating storylines and
less dramatic play in episodes. So would only
the professional viewpoint remain? Would there
not be so much room for parallel storylines of sex
and fast cars? Perhaps the resulting character
would be too boring.

Conclusions

As Gaspar Tagliacozzi, one of the pioneers in
plastic surgery in the Medieval period, wrote in
his work De curtorem chirurgia per insitionem,
published in 1597: “We restore, repair and make
whole those parts of the face which nature has
given but which fortune has taken away, not so
much that they may delight the eye but that they
may buoy up the spirit and help the mind of the
afflicted”.

If in any use of medicine one works with and
for the human body, in plastic, reconstructive
and aesthetic surgery, the raw material is the human
body itself: to reconstruct it and give it beauty
and functionality are the aims this specialization
pursues. The surgeon’s experience and skill are
fundamental, but possibly more than in any other
specialization, a connection with the patient is
fundamental in order to recognize the latter’s ex-
pectations and offer her or him the most realistic
solutions, or to know when to refuse if such ex-
pectations are unrealistic or unhealthy. The plas-
tic surgeon must get inside his or her patients’
minds, recognize body dysmorphic disorders and
help patients to see that, to paraphrase the
French mountaineer, photographer and filmmak-
er Louis Audoubert: “As far and wide as we travel
the world seeking beauty, we will never find it un-
less we carry it with us”.

It is true that private exercise of the specializa-
tion enables plastic surgeons to develop a more
lucrative professional activity since aesthetics is
one of the few medical activities that falls outside
of health coverage and health insurance. But
this does not make plastic surgeons mere skillful
businesspeople trading on their patients’ health
at any price. We should not allow the superficial-
ity of the image that to date has predominated in
film and TV fiction of plastic surgery operations.
Nor should the model of its professionals obscure
the reality of a magnificent specialization that ful-
fills in its deepest sense the definition of health
established in the Preamble of the Constitution of
the World Health Organization: “a state of com-
plete physical, mental and social well-being and
not merely the absence of disease or infirmity”.

Yet it is not just film and television that should
convey that image. Plastic surgeons themselves
are responsible for this image we present to so-
ciety and to make our practice a reflection of our
professionalism, undergoing constant training
in a state-of-the-art, innovative specialization.
Neither do we want to resemble the stereotype
that fiction portrays of us, nor imitate its frivol-
ity, trivializing the surgery we perform, its visible
ostentation and luxury, or constantly appear on
programs of frivolous scientific dissemination or
in celebrity magazines. If not, we ourselves will
ensure that we continue to be viewed as simple
dream merchants, creators of beauty to clothe
humanity. We will lose people’s respect for a
great specialization that perhaps we have not
made known in its true dimension. We are still in

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time. Otherwise, let us not forget that even after his death, Tagliacozzi was condemned for interfering with God's creation, and his body was exhumed and re-buried in unconsecrated ground.

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Masters of Sex and Sexology

Helena Boadas

What might seem like an excuse for screening another controversial and polemic series with high-voltage sex appeal is actually one of the best reflections on scientific method to appear on the small screen. Based on the biography Thomas Maier wrote on William Masters and Virginia Johnson, the couple who convulsed the academic sphere in the nineteen-fifties and sixties with their studies on the human sexual response cycle, this series premiered in 2013 on cable network Showtime (Dexter, Homeland). It is an accurate and truthful retelling partially thanks to the chemistry between its leading actors, Michael Sheen and Lizzy Caplan.

“In 1956, a national renowned fertility specialist met a former nightclub singer. Ten years later, they published a scientific study, which revolutionized our understanding of human sexuality.”

Opening with these two sentences, this series set in the fifties—the first scene offers us a gala dinner with fabulous fifties automobiles, fifties dresses and fifties music—has us ordering in a pizza to remain glued to the sofa for hours on end. But Masters of Sex, furthermore, has an added value that makes it even more interesting from my viewpoint: it is a real story. And one that is quite true to life. Because Masters’ and Johnson’s story was essentially the one the series tells.

How did it all start?

On one hand, we have Virginia Johnson, 32, thrice-divorced, with two kids from her last marriage to a rocker, who had devoted her life to singing until the year before. She is now working as a secretary at Washington University School of Medicine, in Saint Louis, Missouri, filling in medical insurance. She has studies in music and has begun studying sociology at the University.

Meanwhile, Doctor William H. Masters, nearly 40, an obstetrician at the same hospital, after more than ten years of an impeccable medical career, commits the indiscretion of becoming interested in human sexual response. Studies in obstetrics in this period centered on the birth of children, avoiding the process by which they were conceived. He had patients who asked him what they could do if they felt pain during coitus, if they did not reach orgasm, or felt no pleasure. Frustrated because his best answer was to “take a lover”, “get used to it”, or “change your husband”, Doctor Masters realized there was a need to shed light on sexuality. The fact he had worked with one of Kinsey’s disciples at the start of his career no doubt increased his interest in this field. Kinsey had also revolutionized the history of sexuality several years before Masters and Johnson. Readers may know of Kinsey’s studies, or have seen the film based on his life and work, entitled Kinsey, containing a lot of similarities to the series Masters of Sex. It likewise conveys a clear idea of the developmental extent of the history of sexuality at the time. Yet for now let us return to Doctor Masters, who is trying to begin studying human sexual response.

Throughout medicine’s history, forbidden territories have existed. It is as if humanity needed to reserve part of the body for the realm of mystery, the unknown, even the magical. Within this portion, in this unpredictable space, we store everything we do not know, or cannot properly explain.
First it was the brain, then the heart. In the US in the nineteen-fifties, it was the turn of sex. (Allow me a brief parenthesis: in an article on migraines by the neurologist Arturo Goicoechea, I recently read that this magical territory is once again the brain. Naturally, sex is not it, but the brain? Is it a magical territory? It seems so. It seems that it is helpful for us to be able to make statements such as “We only use 10% of our mental capacity”, or “We know practically nothing of the brain”, because we allow space for the unknown, the unexplainable and the unhopec for in short, for magic. Close brackets.) We said that in the US of the time, this forbidden territory was sex. It did not exist, and almost could not be mentioned. Doctor Masters was obliged to work with prostitutes because he had no other option. In the second scene of the series, we see him shut in a cupboard spying on a prostitute with a client, measuring the client’s sexual response, his timer in his hand. Working with prostitutes caused many logistical problems, aside from the fact that a sexual relationship between a prostitute and her client is not representative of sexual relations in general. Furthermore, most of them were affected by chronic pelvic congestion, a factor that also skewed the results. Finally, after much insistence, the doctor manages to convince Willard Allen, his department boss at Washington University, to include his study in the university. Allen warns him that it could be professional suicide, but the project goes ahead.

Doctor Masters needs an assistant and his secretary does not fit the right profile. In the first episode, we see her dressed in a green suit conveying that hard-to-describe air—one having nothing to do with beauty— which certain women give off, as if they have begun to distance themselves from life, from pleasure. Doctor Masters’ assistant must be a special woman. He knows that no female doctor would accept the position because it would compromise her reputation and career. This is when Virginia appears in his office as if by magic, deploying all her sensuality. They discuss the job position, their ex-husbands, and sex. “Before you leave, tell me, why would a woman fake an orgasm?”. “To get a man to climax quickly. Usually so the woman can get back to whatever it is she’d rather be doing.” Virginia has the experience, the broadness of mind and the frankness that Doctor Masters needs. Thus their collaboration begins—though Virginia has practically no university studies nor the slightest knowledge of physiology—which will continue into the 1990s, almost to the end of both their lives.

What methodologies does the scientific study use? In general, case studies, surveys, direct observation and the experimental method. So as Alfred Kinsey used surveys, Masters and Johnson use direct observation. And they do not have it easy. Because observing the digestion process of somebody who has eaten an apple, for example, is not the same as observing how this same subject responds to sexual stimulation. In the series, we see how their study causes an uproar in the university hospital. We all know that something interesting is going on in that office, but nobody knows exactly what. We even see an attractive young doctor auscultating the wall with his stethoscope. Here, in this difficult territory, is where Doctor Masters and Virginia Johnson discover that their natures, their skills and working methods complement each other so as to form a formidable team. All the aspects of Virginia’s character listed above are added to those of Masters: he is obsessive, demanding, rigorous, meticulous, not greatly enamored of social relations, of few words and very serious, though one should not forget his subtle sense of humor. These different natures of Masters and Johnson are very well represented in the series, except, in my opinion, in one respect. In the character of Doctor Masters that Michael Sheen plays, there is a toughness that I am not sure the real person displayed. The strict and serious demeanor of a man of few words does not imply such sometimes unpleasant toughness, which I have not found in any biography on William H. Masters. They rather speak of his great humanity and warm capacity for understanding. However, except for this facet, both characters are well represented.

Masters and Johnson’s importance in the history of sexology

Was their work truly as relevant as the series depicts? Yes, it was. Absolutely. Their studies re-
vealed a clear before-and-after situation in the study of human sexuality. Furthermore, they laid the foundations for the sexual revolution of the sixties. To start with, they managed to collect highly accurate information on the physiological changes in the human sexual response cycle. Moreover, they defined these phases: excitement, plateau, orgasm and resolution (Fig. 1). All these data were key in order to profoundly understand the human sexual response cycle, especially to be able to treat possible dysfunctions. Let us examine these phases in detail.

In the first, excitement, we observe an increase in heart rate and temperature. Vasocongestion of the pelvic area means that men experience an erection and in women, the vagina expands and is lubricated. Breasts and nipples also become larger.

When the excitement reaches its peak, all the changes are maintained at this highest level. This is the phase known as plateau, characterized by an intense feeling of pleasure. Though the perception is one of calm, in this phase muscular tension increases and this is when the sex flush occurs (some areas of the body, normally the chest and cheeks, redden). Secretion of vaginal fluid increases in women and men tend to feel an intense urge to ejaculate. This phase’s duration is highly variable. Some couples extend it to enjoy this interval of pleasure for as long as they can (moving very slowly, stopping for a few seconds, using gentler stimulation, or changing position, etc.). In general, women have the capability to extend this period for longer than men.

Now muscular tension, blood pressure, heart rate and breathing accelerate more and more until orgasm is reached. Tension has reached its peak and is freed with this explosion. Involuntary contractions occur of the man’s penis, the woman’s vagina, and the anal sphincter in both. Men ejaculate—although not always! It is not so common, but orgasm may occur without ejaculation in men. In women it is the opposite: normally visible ejaculation does not occur, though in some cases it does, composed of a mixture of urine and vaginal fluids.

It seems that female ejaculation is currently in fashion in pornography, however, be warned: most female ejaculation in porn videos is false: the actresses use tricks to simulate ejaculation. It is important to know this because such fashions can cause a great deal of sexual frustration in couples who think that certain practices or phenomena are common, so they feel obligated to try and replicate them. In fact, yes, some women experience ejaculation, but they are definitely not the majority. Furthermore, these ejaculations are substantially more modest than those we see on-screen. Many sexual problems arise from preconceptions or false ideas we have in our minds about sexuality. So in Masters and Johnson’s time, such false ideas generally arose from a lack of information. Nowadays, we suffer from the opposite: we have vast amounts of sexual information; the problems come from not understanding or digesting it well. Pornography is a source of pleasure if used well: it can liven up our sex life with just a click. The danger is forming a mistaken idea of sexuality. This occurs often, because the models in pornography, though exciting to watch, are generally far from authentic sexuality.

But let us return to the orgasm. As well as the physical response, an emotional response also occurs. The bond between the couple increases through the release of certain hormones and through their union, which always signifies shared pleasure. This huge emotional release may be experienced as sobbing, crying out, or even laughter. Each of us expresses it in our own way. Both men and women can experience more than one orgasm in every sexual relation. The male, if he has ejaculated, needs what is called...
a refractory period (a period of rest before getting excited again). Women are fortunate in never requiring this; they can have one orgasm after another. After the orgasm (or orgasms), little by little normal physical and psychological activity is reestablished: this is the resolution phase. Vital signs recover their equilibrium and a sensation of relaxation and general wellbeing takes over.

Masters and Johnson defined these four phases—excitement, plateau, orgasm and resolution—but, in fact, they omitted one, the first and essential phase: desire. Without desire, the sexual response cannot begin. Sexologist Helen Kaplan added it to the list in 1979, though, in fact, Masters and Johnson had already spoken of it. They specifically defend a concept of sexuality based on a couple’s relationship, a couple who communicate, far removed from the purely mechanical exercise that sexual relations can sometimes become, a concept including desire. So, despite not including it in their list, it can be inferred between the lines, especially in their later studies. Despite all this, however, the merit of having correctly included it in the phases of sexual excitement lies with Kaplan.

In men, excitement generally occurs faster, but the duration of the plateau is shorter and moreover drops sharply. In women, excitement occurs more gradually and is maintained for longer, but they also have the capacity to extend the plateau and their orgasms. Furthermore, their descent is gradual (Fig. 1).

All these data were significant to fully understand the human sexual response cycle and, above all, to treat possible dysfunctions. I say “above all” because Masters and Johnson’s most important contribution to the history of sexology was, without a doubt, their sex therapy. In fact, most of today’s effective sex therapies were created through continuing Masters and Johnson’s pioneering work. Their fundamental ideas remain 100% valid and their proposal continues to be effective, while being adapted to today’s needs and to new contributions and innovations.

It is important to clarify that sexual dysfunctions, the object of the therapy Masters and Johnson proposed, are just a small part of a broad spectrum of possible problems related to sex. The list would be extremely long. We could mention: patterns of problematic behavior (exhibitionism, pedophilia, sexual aggression, compulsive sexual behavior, risky behavior, etc.); sexual identity problems; syndromes related to violence and victimization (due to sexual abuse in childhood, sexual harassment or sexual violence, sexual phobias, etc.); syndromes related to reproduction (due to sterility, unwanted pregnancies, abortions, etc.); and sexually transmitted infections, among many other problems and conditions. Some of these disorders can be treated through therapy, though not all. One must always seek a suitable professional for each case, and often an interdisciplinary approach is required.

Leaving aside this spectrum of diverse problems related to sex, I want to focus on the aim of Masters and Johnson’s therapy: sexual dysfunctions. We speak of sexual dysfunction when difficulty exists during any phase of an individual’s sexual response (desire, excitement, plateau, orgasm or resolution) and this sexual response significantly deteriorates. This is a weak definition, but to date we do not have a better one.

Classic sexology distinguishes between male and female sexual dysfunctions (Table 1). Al-

<table>
<thead>
<tr>
<th>Women</th>
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<td>General sexual dysfunction (frigidity)</td>
<td>Erectile dysfunction (impotence)</td>
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<tr>
<td>Vaginismus</td>
<td>Premature ejaculation</td>
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<td>Orgasmic dysfunction</td>
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<td>Ejaculatory incompetence</td>
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though this classification is already outdated, it continues to be used, and therefore is useful to know. So traditionally, women experience three sexual dysfunctions: general sexual dysfunction refers to a lack of desire or excitement, and to the incapability of feeling pleasure; vaginismus is an involuntary contraction of the vagina that makes penetration impossible; orgasmic dysfunction is the inability to have orgasms. Where men are concerned, five dysfunctions are described: erectile dysfunction is an incapability or difficulty of maintaining an erection; premature ejaculation is an early ejaculation, shortly after beginning penetration, while delayed ejaculation is the opposite phenomenon; lastly, there are men who can have an orgasm but cannot ejaculate (ejaculatory incompetence) and the opposite, men who can ejaculate but not experience an orgasm.

At first sight, sexual dysfunction in men and in women seem very different, but in fact this is not so. Modern sexual research proposes a fresh, much more accurate classification of dysfunctions. We now understand that, since sexual response in men and women is practically identical, so are their dysfunctions (Table 2).

Current sexology, then, explains that, though expressed differently, sexual dysfunctions in men and women are the same. They may be related to the lack of a bodily response at the moment of excitement (problems of tumescence), with the orgasm, or else with pain during sexual relations. It is useful to note that the incapacity to achieve or maintain an erection and the absence of vaginal lubrication have exactly the same origin. Each expression of a dysfunction has its peculiarities in each sex and each person, of course, but it is important to understand that common origin. Only vaginismus is an exclusively female dysfunction, in its own category.

It goes without saying that where sexual health ends and dysfunctions begin is highly subjective. At what point does a man, a woman, or a couple decide that his orgasm occurs too soon? It may be that a specific time for one couple signifies a problem, but not for another. At what point does her orgasm occur too late? The answer is the same. One couple will seek solutions and will adapt; while another will experience it as a problem that affects their sex life. Often there is a clear problem, such as vaginismus, or the lack of an erection stopping penetration, but things are not always so obvious. Sex can be enjoyed even without an erection. In sexology, we understand that each couple is a world unto themselves and we are simply here to help people enjoy their sexuality. Above all, nobody should suffer as a result

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**Table 2.**

- Disorders of sexual desire: alike in both sexes.
- Problems of tumescence:
  - In women: these occur as a lack of vaginal lubrication.
  - In men: these occur as a lack of penile erection.
- Problems of orgasm:
  - Depending on the time of appearance:
    - Shortly after commencing coitus:
      - In women this is not considered a problem.
      - In men it is considered a dysfunction if it is too early in his, her or both of their opinions.
    - A long time after commencing coitus:
      - In men this is not considered a problem.
      - In women it is considered a dysfunction if it is too late in his, her or both of their opinions.
  - Absence of orgasm: alike in both sexes.
- Disorders of sexual pain: alike in both sexes.
- Vaginismus: a disorder exclusive to women.
of their sex life. Often consultations are solved by an hour’s conversation in which some false belief is discarded. Sometimes it is that easy.

Until Masters and Johnson, sexual problems were classified as medicine or psychiatry. In other words; problems were classed as purely physiological or as mental health disorders. Attempts were made to resolve the former with medical treatments, and the latter basically through psychoanalysis, without very effective results. What Masters and Johnson did was to give sexual difficulties a human and especially a relational dimension. They understood that a sexual problem was a problem of the couple, not just one person. And that is how they treated it: the therapeutic object was the couple’s relationship. To give an example: until that time, if a man had problems achieving an erection, physical causes were sought within medicine; or else he was treated by psychoanalysis to discover the origin of his impotence. After Masters and Johnson, such erectile dysfunction was considered a problem within the couple’s relationship: perhaps the man felt pressured, was scared of failure, or of losing his partner. Or any other reason within the relationship sphere might be considered (naturally, once having eliminated any medical problems). This change of approach signified a revolution in treating sexual dysfunction.

The fact that their therapy contained no trace of dogmatism or arrogance was a key factor in its effectiveness. Because sex therapy has a pitfall: what is normal, natural or healthy sexuality? Who establishes this? Is it possible for scientific criteria to be combined with cultural ones? Is it possible that the therapist unknowingly functions according to his or her morality?

Let us take the example of masturbation throughout history. In ancient Rome, the renowned Greek doctor, Aelius Galenus, recommended that therapists masturbate their female patients to recover their health. Yet in the eighteenth century, the Swiss doctor Samuel Tissot, though brilliant in other areas, was convinced that masturbation caused very serious illnesses. In the nineteenth century, many women underwent an ablation of the clitoris (as well as in Europe and in America until very recently) to eliminate the habit of masturbation. In the early twentieth century, Wilhelm Reich defended onanism to help recover natural sexual function. It also seems quite shocking that, following Galenus’s recommendations, some of his psychoanalytical colleagues in Vienna masturbated their female patients in therapy sessions. This type of therapy is currently prohibited by codes of ethics. What all of these examples point to is that often, what doctors or therapists call natural is, in fact, a value concealed by a supposed scientific truth. It is very difficult –perhaps impossible– to establish what constitutes “natural sexuality” according to scientific criteria, and almost always ideological, moral or cultural criteria come into play.

One sensational example of the connections between science and morality is the following. It occurred in 1973 and was the greatest success in medicine, almost a miracle: millions of people were cured at a stroke, one afternoon. How? They simply chose to delete homosexuality from the Diagnostic and Statistical Manual of Mental Disorders (DSM), which describes mental disorders. Its editions are updated every several years, and although it has been highly criticized because it medicalizes behaviors that perhaps should not be medicalized, such as homosexuality in its time, it is the manual that psychiatrists and psychologists currently use. Nowadays, homosexuality is no longer a perversion, but it was. Who can assure us that what we currently think of as perversions (or paraphilias, as former perversions are called) will not be included among natural sexual behaviors in a few years? It will depend on a combination of the science, culture and morality of the period. In fact, this is simply a conflict between the individual and society. The sex therapist uses training, information and common sense to find the exact point, the best equilibrium possible.

Masters and Johnson developed a sex therapy that strives to put aside moral prejudices to view the couple exactly as they are and understand each sexual problem within their circumstances, with huge amounts of common sense.

Yet although Masters and Johnson managed to take sexual dysfunctions out of the context of medicine and psychiatry, it is clear they did
not arrive there by themselves. Several researchers prior to them began to lay down the bases of what would become modern sexology. Possibly the most important of them was Alfred C. Kinsey, the first researcher to speak of sexual habits in scientific terms. This was an almost revolutionary act. He conducted questionnaires with thousands of men and women, each containing hundreds of questions. The interviewers were very well selected, even knowing the questions by heart, and the questionnaires were well designed, so that the research was thoroughly valid. His results brought to light habits that supposedly did not exist. For example, sexual encounters outside marriage were found to be frequent, masturbation was quite common and many people had had occasional homosexual experiences. One of Kinsey’s successes was to create a scale for classifying one’s degree of heterosexuality versus homosexuality. This fact was revolutionary, because until that time the population were classed as homosexual or heterosexual. However, Kinsey’s research showed that this division is not possible: sexual orientation is a continuum that stretches from pure heterosexuality to pure homosexuality. Each and every one of us is situated at some point on this continuum. The Kinsey Scale (Fig. 2) is still used in some questionnaires on sexuality, and all the information in his surveys, published in two volumes, is very valuable.

After Masters and Johnson, and above all from the sexual revolution onward, sexuality became normalized and studies have become common (Durex Sex Survey, Encuesta de salud y hábitos sexuales from the Spanish National Institute of Statistics, studies by the Spanish Federation of Sexology Societies, etc.). Perhaps the last study that constituted a social change was Shere Hite’s, published in the sixties, which builds on Masters and Johnson’s and Kinsey’s studies. Hite conducted thousands of questionnaires on attitudes and sexual behaviors in men and women. The Hite Report was criticized for a lack of statistical and data processing accuracy. In fact, this is true, because more than an analysis it is a compendium of stories. Yet it is likewise hugely important, because it is an extremely valuable manner of explaining sexuality and countering myths and taboos.

“**In order to function sexually, a person needs only a reasonable state of general good health and an interesting and interested partner.**”

As mentioned, Masters and Johnson’s work began to lay the foundations for the sexual revolution. It goes without saying that the sexual revolution meant huge freedom for men and women (above all the latter). One could speak of equality of the sexes, the appearance of the contraceptive pill and, in many countries, free abortion. With the sexual revolution, different types of sexuality were normalized, including extramarital relations, children born out of wedlock, homosexual or single-parent families, and even same-sex marriage. All this was extremely necessary and was fabulous. However, there is a large “but”. The sexual revolution stems from the freedom to have sexual relationships with whomever we want, and that is good, but we have reached a point that was unforeseen in the original sexual liberation: the

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![Kinsey Scale](image-url)
trivialization of sexual relations. Sex is an act of deep and intimate communication that has physical and emotional consequences. Removing such importance from sex and turning it into a mere act of physical release is causing—paradoxically—the same problems that stem from being forced to have sexual relations in a marriage we do not want to be part of.

Masters and Johnson, in their later works, spoke of that intimate connection, of the profound dialog between two bodies that transcends mere physical contact. They themselves experienced such a communion with each other. And they chose each other, even while Doctor Masters was still married. One reading is that the quest for a sexuality that goes beyond a physical release can be interpreted as a conservative, outdated, almost puritanical stance. I believe it is the opposite: it now seems to be the more revolutionary act. Sexual liberation has provided the very freedom to do what we want. Now we must choose well. This does not necessarily mean choosing a partner to get married. We can choose to have sexual relations with someone of the same sex, with two people, or simply not have them with anybody. Why not? We can do what we wish. But it must have some purpose and, above all, make us feel good. Nowadays, we see many women in the consulting room who believed in this half-baked sexual revolution along Sex and the City lines, who do not choose their sexual partners well because they never learned to discriminate in that sense. The result (naturally, avoiding moral judgment of any kind) is that they feel bad. People are capable of experiencing vast sexual pleasure if the partner we are with (in whatever form, whether a marriage, friendship, de-facto, or casual sex partner) acknowledges us. If they recognize us. If we like them and they like us.

Doctor Masters, at the end of his life, said: “In order to function sexually, a person needs only a reasonable state of general good health and an interesting and interested partner”.

What happened to Masters and Johnson?

At the time of writing this chapter, two seasons of Masters of Sex have been screened while a third is in production. Nevertheless, since we know Masters’ and Johnson’s real lives, I can tell you that (spoiler alert!) he finally got divorced from Libby, with whom he had three children. Doctor Masters and Virginia Johnson were married in 1971. The clinic which they had opened in Saint Louis a year earlier became the Masters and Johnson Institute in 1978. They worked together until 1992. Virginia, at 60 years old, keen to enjoy her final years, her family life and to travel, became weary of a husband who spent almost his entire day locked in his office working. In 1993, they divorced. A year later, William, ill with Parkinson’s, retired and remarried, this time to an old flame from his childhood. The Masters and Johnson Institute closed its doors in 1994, though Virginia kept working almost right up to her death.


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CSI and Forensic Medicine

Adriana Farré, Marta Torrens, Josep-Eladi Baños and Magí Farré

A successful model for TV franchising, this CBS series about a state-of-the-science forensics team who can solve even the most complex cases in a matter of minutes has opened franchises in three different cities, as well as a new division on IT crime called Cyber. The original fiction, which went to air in 2000 starring the now legendary Gil Grissom as Head of the Las Vegas CSI Unit, shut up shop in 2015 after 15 straight seasons and a total of 337 episodes. Its Miami and New York spin-offs, first screened with notable success in 2002 and 2004 respectively, wound up ten years later. Cyber, which is still on air at the time of writing, every week attracts an average of ten million viewers.

Crime Scene Investigation (better known as CSI or CSI: Las Vegas) is a US TV series created by Anthony E. Zuiker and produced by Jerry Bruckheimer, which premiered in October 2000 on the CBS network, winding up after 15 seasons, in 2015. The last episode was feature-length, screened in the US on 27 September 2015. CSI was a television success in the opening decade of this century, with a worldwide audience of over 73.8 million viewers in 2009. In 2012, it was recognized as the most-viewed TV series in the world for the fifth year running, since CSI has been screened in over 200 countries. Even so, in the Emmy Awards it only reaped three trophies in technical categories. It premiered in Spain in 2002 and its early seasons were hugely successful, gaining average audience shares above 25%. It ran free-to-view on Telecinco and Cuatro, among other channels.

Such success allowed it to become a franchise that spawned three offspring: CSI: Miami (2002–2012), CSI: NY (2004–2013) and CSI: Cyber (on air since 2014). The structure of all three CSI series set in cities is very much alike: investigate the scene of the crime live, gather evidence and solve the mystery, though each uses different characters. The original series is set in the US city of Las Vegas (Nevada) and centers on the work of a team of forensic scientists and criminologists who belong to the city’s police department and investigate some of the crimes occurring there. The team is trained to solve each case through the gathering and analysis of evidence at the scene of the crime, seeking the guilty and interrogating witnesses and suspects. They work around the clock until they resolve the situation. Each episode has a main plot related to a violent crime and a subplot that affects the investigators. The crime or felony is almost always solved in a single episode.

The keys to success of the forensic scientists

According to the experts, the original series and its franchises owe their success to blending crime fiction and medical or scientific genres, as well as their style of filming. In terms of the former, the highlight is on the preciseness and detail in the gathering and analysis of the evidence, taking the perspective of a forensic autopsy, the use of fast, sophisticated technology to conduct analyses, including genetics and toxicology, and the investigators’ scientific knowledge.

In its day, CSI used an innovative method of filming, using many special effects, plus original
use of color and light. Furthermore, it is filmed on 35-mm cameras, typically used in cinema movies. The storylines tend to happen at night, the cutting is frenetic, the action changes quickly between interiors and exteriors while the aesthetic in certain scenes resembles a video clip. The initial hypothesis of the facts and their resolution are presented as a flashback, either in black and white or sepia.

Due to its popularity, it has received several criticisms both for its degree of graphic violence and sexual content as well as for the rather unrealistic image of the procedure for solving a crime. It has been accused of being thoroughly excessive in its violence. It does not shy from clearly showing the injuries victims suffer (always with plenty of blood), nor does it avoid decomposing flesh riddled with revealing insects. During the necropsy, cadavers are clearly shown with their entrails on view. They carry out simulations of blows, reconstructions of the identity of the guilty, and each meticulous detail in the lab analysis of the evidence is always shown. One of the most original aspects of the series since it began is the use of enlargements and micro-cameras to show wounds in the greatest detail, reveal a bullet’s trajectory, or explore injuries or the inside of organs.

**Applying the CSI method**

The scripts of CSI and its franchises are highly similar. It starts with the presentation of the crime or felony before the opening credits. Then the CSI investigators arrive to make a highly detailed visual inspection of the corpse and the crime scene. They review the victim in detail, photograph the scene and carefully gather the evidence. This task is shown with great thoroughness. At this point, witnesses and possible perpetrators are also interrogated while the first arrests are made, if deemed necessary. The investigators discuss the murder details and form their early (normally mistaken) hypotheses regarding events, either at that moment or after the initial analysis of evidence.

The work continues in the forensics lab, where they analyze the evidence using technologically advanced methods. These include finger-printing, analysis of biological or material remains, ballistics, insect recognition, DNA analysis and detection of poisons and medication. All this develops at a frenetic pace and the results obtained almost immediately. The investigators consult the forensic pathologist and discuss the autopsy results in detail. They scour databases to identify the case, the suspects involved or others who may be related to the case in some way. The work progresses with further questioning and the analysis of new evidence, some from subsequent murders or fresh crimes related to the case. More clues are revealed, or where there is a new clue, a fresh analysis is made. The suspects may be questioned again, new evidence is found or the old reviewed, and the final (correct) hypothesis is formulated. The case is solved by unveiling and grilling the perpetrator.

**CSI in opposition to reality**

Despite the fact the show’s producers consider it realistic, CSI is nothing more than fiction. There are vast differences between the on-screen story and the reality of police and forensic investigation. To start with, on CSI it seems like all the team members are able to take part in all phases of the investigation. They travel to the crime scene, process the scene, gather and analyze evidence, interrogate witnesses or suspects, analyze evidence and almost always operate in the streets or in buildings to arrest the criminal. It is unusual in that they are armed and use their guns if the situation so requires. In the final instance, they solve the crime. They all seem to be experts, though it is true that some of the technicians only work in the lab, some police do not do biological work and the forensic pathologist only conducts autopsies.

The reality of criminal investigation and forensic medicine in every country is quite different. In fact, there is a clear separation between judicial police, who investigate and arrest the accused, scientific police, who gather and analyze evidence, and forensic scientists, who work in institutes for legal medicine. Each concentrates on their own specialization, without trespassing into any other professional areas. In Spain, the forensic analyst does not form part of the investigative
team. He or she is a technician who only states her or his findings before the judge. The most surprising aspect is the role of the CSI characters in questioning and in arrests—clearly an exaggeration, more in the realm of fiction than truth.

The characters in the CSI team appear to be scientists, or at any rate, police officers who apply scientific methods to solve cases. They use science, logic and deduction instead of firearms. Evidence is the most important factor, and it is always conclusive, in contrast to the interrogations. This is obvious in their attitude: the people interrogated lie whereas the evidence is absolute. At the crime scene, they dress characteristically, identified by their team jackets. At the police station and crime lab, they wear lab coats and are surrounded by analysis apparatuses and computers. The laboratory is dark and crowded with equipment, flasks, precipitate beakers, test tubes containing mysterious liquids and high-technology microscopes. The actors are seen handling samples, transferring liquids with pipettes and placing vials into an analyzer. They review the results and reach pertinent conclusions. They all seem to have the skills of lab researchers and use scientific and medical jargon with ease. The reality is quite different, as the arguments given above show.

Both the gathering of evidence and samples, as well as their processing and laboratory analysis are done using very advanced technology. A suitable apparatus for determining a result is never lacking, the equipment is all ultra-modern and—even more significantly and startlingly—the results arrive lightning fast. This situation is valid whether consulting identity databases, processing and detecting fingerprints, or analyzing toxicology or genetic DNA evidence. It seems as if the entire staff and technology are at the service of the case in hand. There are no delays, breakdowns, queues or waiting around. Everything comes out at the first try with no need for a repeat. The episodes do not show the time or preparatory procedures that analysis requires, or the time required to extract samples, which is always much slower. Everything is very easy: the sample is placed in the suitable apparatus and the required result immediately obtained. In the series, all the crimes are solved within hours or a few days.

Naturally this contrasts with reality, with restrictions on equipment, staff and techniques, even in countries such as the US. Many techniques cannot be applied, and in others, the results may be delayed for months or even years. Science requires patience: it is tiresome and takes time. The means are all too often insufficient for the need.

Fiction forces cases to be flashy and complex, to stimulate interest and last the length of each episode’s storyline. In the early seasons, several cases were often investigated simultaneously in a single episode, but recent seasons have about one case per episode. The crimes are often based on real cases, but they are presented more realistically or are clearly exotic. An analysis of the first season revealed a total of 74 cases investigated in 23 episodes. Most corresponded to violent crime (72%), especially murders (64%), robberies, rapes, suicides, kidnappings, blackmail and accidents. Most of the detainees were male (77%) and white (87%). The victims were mainly male (66%) and Caucasian (91%). The crime was committed mainly using firearms (36%) and knives or other cutting instruments (17%). In fact, most investigations are routine and it is uncommon for a police officer to frequently investigate such spectacular or complex cases.

The series reinforces the perception that criminals always leave sufficient clues to enable a crime to be solved, which occurs in most cases. Despite continuous advances in forensic science, situations exist where there is simply insufficient evidence to solve the case, or the proof available does not help solve it. It seems that officials responsible for ensuring the law is obeyed and forensic analysts are always one step ahead of the criminals, which often is clearly not true.

The CSI effect

One of the greatest problems the series brought to light were the high expectations created among people in real life. Watching the series, one would believe that crimes can be solved in two hours, data processed in minutes and that forensic laboratories are crammed with high-tech equipment fitted with lasers to do all the work for you. The truth is that processes are long and te-
The CSI effect, sometimes called “CSI syndrome”, refers to the various ways that the exaggerated representation of forensic science in CSI and other TV programs influences public perception of criminology. The advanced techniques shown in these series heighten expectations of judges, juries and criminals on trial, regarding the evidence found at a crime scene. The term is employed in the US for the demand by juries for more forensic evidence in criminal trials so as to make sounder decisions. The same phenomenon is applied to defense lawyers, who request a greater amount of incriminating evidence. And the same happens with the police: demand for proof has likewise increased. The truth is that in most cases, this simply overloads crime and forensic medicine labs with work.

The success of CSI and other similar series increased viewers’ interest in forensic medicine and the number of enrollments in courses on the subject. In Spain, reliable data does not exist of its influence on enrollment in the Degree in Criminology many universities offer. However, as occurs with all popular series, it is likely that it stimulates interest in the subject and so more people choose it as a vocation. Nevertheless, the confusion between criminology and forensic science can lead to the frustration of expectations from those starting to study the former without knowing what, in fact, it is.

One of the negative effects of CSI and similar series is that criminals can learn from them and, as a result, better prepare their actions and carry them out in more detail to leave as little incriminating proof as possible at the crime scene. The result is greater difficulty for investigators attempting to solve cases.

In the end, it is more important to be able to distinguish between reality and fiction, between what is a police investigation and forensic medicine, compared to what is TV fiction. The latter aims to depict reality in an amusing way, leading it to exaggerate situations so as to entertain and consolidate its audience. If, furthermore, one learns something, even better. Reality tends to be more routine, slower and more boring, though as the saying goes, “sometimes, truth is stranger than fiction”.

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Homeland and the Emotional Sphere

Liana Vehil and Luis Lalucat

The producers of the action-packed 24, Howard Gordon and Alex Gansa, have at last earned critical praise on this adaptation of the Israeli series Hatufim, first broadcast on the cable network Showtime in 2011 and still on air. What began as a game of suspense and ambiguity between a CIA agent suffering from bipolar disorder (Claire Danes) and a US marine recently freed from captivity at Al-Qaeda’s hands (Damian Lewis), has developed into a fascinating spy fiction. Year after year it is ranked among the favorites at the Emmy Awards (it harvested six trophies in its premier year), and has even “hooked” President Obama himself.

Its different emotional states, as well as its anguish, have generated a great deal of interest among the different narrative arts. The history of literature lets us see into the lives and passions of fascinating characters. We could mention Madame Bovary’s day-dreaming and emotional deception in Gustave Flaubert’s masterpiece, or the affective sufferings of the characters in Fyodor Dostoyevsky’s novels, held captive by their emotional development and a heightened introspective view of their life experiences. Film in particular has explored the human personality and helped us to experience the reactions of fictional characters as our own. Firstly films, and more recently TV series, have fascinated us with the lives of their everyday heroes, showing us their likenesses and revealing our own fears and desires. The treatment given the emotional states constitutes, in fact, the cohesive core of any film genre such as melodrama, which from Douglas Sirk to Pedro Almodóvar, and including Rainer W. Fassbinder and recently David O. Russell’s Silver Linings Playbook, submerges us in the depths of the most extreme human emotions.

Homeland is an action series that centers on the coverage of international conflicts and the fight against terrorism. Fast-paced, with decisions taken at lightning speed, it represents the supremacy of action over introspection. Though the series’ main aim does not lie in describing its characters’ mental functioning, the scriptwriters offer viewers elements to identify with them by showing how continued exposure to situations of risk can affect one’s mind and emotional states. The storyline focuses particularly on the main character, Carrie Mathison, a CIA agent who has been diagnosed with bipolar disorder.

Bipolar disorder is considered one of the most significant psycho-pathological disorders affecting mood. This name is given to disorders that are characterized by mood swings. One’s mood consists of a range of emotions that different experiences evoke in one. These emotional states and resulting behaviors are considered healthy and within the norm when they adapt to the context in which they are expressed. Generally, at the risk of oversimplifying for clarification’s sake, within the range of reactions appropriate to their setting we would include annoyance at an injustice, sadness when facing loss, or happiness at good news. Losing control in expressing one’s feelings would also be considered acceptable as would exaggerated annoyance at highly stressful situations if they occurred momentarily. On the
Homeland and the Emotional Sphere

contrary, in assessing a disorder one should consider whether these reactions occur repeatedly or in an exaggerated way, with no apparent qualitative or quantitative link to outside stimuli, and whether they determine the individual’s relationship with surrounding reality.

Considered to be a serious mental disorder, bipolar disorder, formerly called manic depression, is characterized by changing moods. These swing between two opposite poles: the mania, or phase in which the subject appears exalted, euphoric and harbors grandiose delusions on one hand; and on the other, depression, the phase where sadness, inhibition and thoughts of death predominate. Such fluctuations can be observed in Carrie’s character when at times she gets into situations of great risk from solely following her impulses, disregarding her colleagues’ warnings, or else the opposite when, discouraged, she shuts herself away, and is wracked by sobbing, even attempting suicide.

This initial schema of cyclical alternation between mania and depression does not occur evenly in all individuals suffering from this disorder. Cases occur in which the alternation between euphoric and depressive states are combined with more or less prolonged phases of full stability and functional restitution, with a good response to treatment, absence of associated problems and a return to a fully independent life. Even so, most people tend to face more of a torpid evolution, with frequent relapses and the manifestation of other associated clinical features like anxiety, substance abuse and some degree of functional deterioration.

During manic phases, patients can also manifest contrasting states. On one hand is hypomania, a euphoric state in which individuals appear to be in a buoyant and expansive mood, alongside irritability and impulsiveness, disquiet, agitation, uninhibitedness and verbosity, which nevertheless does not significantly interfere with daily activities. On the other hand is a marked state of mania in which manic symptoms of a more invalidating nature predominate. The latter seriously interferes with the individual’s functional performance, going as far in certain cases as developing psychotic symptoms like delirium or hallucinations. Sometimes they require psychiatric hospitalization.

In the above descriptions, it is easy to recognize some of the moments and behaviors Carrie experiences: she seems to fall into a hypomanic state when she makes decisions following her impulses without considering the risks associated with them, or shows signs of an exaggerated self-esteem that does not seem congruent with her context. Yet at the same time, she maintains a high level of competence. She is capable of establishing a significant personal relationship to which she remains emotionally faithful, and of modulating her irritability. Nevertheless, she also displays a more serious clinical presentation at such times as those behaviors escape her control, she loses her capacity for empathy, becomes submerged in her emotions and even has distorted perceptions and invents delirious conspiracy ideas. This is when she needs to be hospitalized.

Carrie likewise shows symptoms typical of the depressive phases when overwhelming feelings of sadness and despair, tiredness, anxiety and a marked alteration in her vital rhythms, such as insomnia and appetite loss, appear.

The information provided by the series might also bring to mind a mixed episode; in other words, one simultaneously combining manic and depressive symptoms. So symptoms of hyperactivity, worry, feeling down, a tendency to cry and feelings of guilt can be associated. As the series reflects, such variability of the mixed episode hugely complicates diagnosis and treatment, and has the more negative consequence of increasing the risk of suicide.

Given the variability of clinical presentations, bipolar disorder has been subdivided into two conditions: bipolar I disorder (BP-I), is characterized by alternation between depressive and manic episodes; and bipolar II disorder (BP-II), by depressive and hypomanic symptoms. In our case, Carrie’s behavior rather resembles BP-II disorder.

Investigations developed around the etiological hypotheses of the disorder show the importance of the genetic load, which points to greater personal vulnerability and seems to confirm that the presence of a disorder on the bipolar spec-
trum in a parent increases the chance that descendants will suffer from it. As occurs with other complex mental states, the causes tend to be due to multiple factors and consequently the influence of other aspects linked to development are highlighted. Altered or unstructured family relationships in childhood may be another factor added to the genetic variable, and contribute to forming a fragile psychological apparatus, capable of unleashing the disorder in later life. In addition to having a father suffering the same illness, some of Carrie's family experiences could be related to the tricky regulation of her moods. Her mother's difficulties in confronting mental suffering, plus her own instability in relationships and her father's manifest psychopathology, bring to mind an atmosphere in which emotional conflicts generate circular dysfunctional movements that feed into each other, causing huge discomfort and hindering the resolution of vital problems. Escape from the suffering as a mitigating resource, instead of dealing with grief, may have scarred her family's emotional environment. In the series, Carrie rarely trusts in introspection to confront and overcome her conflicts and losses, while she opts for life choices that may encourage the destabilizing of her emotions and contribute to her psychopathological development, such as her taste for risk and a choice of job that often subjects her to situations of stress and high risk to her physical and mental health.

We know that bipolar disorder often evolves toward chronicity. Its most invalidating manifestations tend to appear progressively over a lifetime, and, in general, limit the individual's functional capacity. However, it is not shown like this in the series, since Carrie's behavior seems perfectly adapted to her employment context. She offers the image of somebody frequently dealing with emotional crises and physical risk yet she achieves optimum results in resolving the tasks she is set. Only at certain moments does the tension get too much, affecting her capability to work and the caliber of her interpersonal relations. We do not have sufficient data to evaluate the foreseeable evolution of the disorder, and one must always consider the variability of personal characteristics. However, in Carrie's case, this may involve an evolution toward chronicity. In fact, the frequency of critical episodes gradually increases, until two episodes occur in a very brief interval of time.

The quality of therapy plays a large role in the disorder's development. Because it is a highly complex disorder, it requires a complete treatment, both medical and psychological, incorporating rehabilitative interventions. The series fundamentally covers pharmacological treatment, the situations requiring psychiatric hospitalization, and certain general recommendations in relation to healthy living patterns. Given the importance of the subject, we will briefly outline a description of the recommendations issued in clinical practice guides.

When designing therapeutic interventions, great significance is attached to the extent of capability and commitment the individual must assume. Any professional intervention runs the risk of not being suitable, or being interrupted, without the involvement and agreement of the sufferer. So it is essential that the individual is aware of the distinctive features of their disorder, that they know the protective and risk factors associated with it, as well as the importance of maintaining a high level of "self-care". For the same reason, it is advisable that individuals are able to establish alliances with the professionals responsible for their treatment and with different family members. Despite her scarce awareness of the risk, Carrie always trusts somebody: when she refuses to talk to a psychiatrist who might monitor her medication, she tends to follow the advice of her sister, who is both a family member and doctor. In critical circumstances, she places herself voluntarily in the hands of the mental health system to receive electroshock therapy. Unfortunately, from what we can see, she is not consistent enough in caring for herself, one of the significant aspects of maintaining clinical stability.

Currently, pharmacological treatment is considered fundamental, above all based on lithium salts and other mood stabilizers, but so is participating in a therapy process of psychological and rehabilitative interventions. Carrie's father, who suffers from the same disorder, tells his daughter about his personal experience with the medica-
tion he is on. At other times, he tells us about the prescription of different drugs, though he mentions no medical monitoring system.

It does not appear he has been recommended or tried any structured psychological or psychosocial intervention beyond certain general recommendations on healthy living patterns. In contrast, currently, a better prognostic is associated to systematic health monitoring that offers information on the illness and training in strategies for combating it. This aims to optimize handling of the disorder, instructing in early detection and consequent immediate action when new symptoms appear that forewarn of a relapse.

Electroshock therapy, which the heroine undergoes, is recommended in cases of serious depressive symptomatology in which any other therapeutic intervention has been shown to be unsuccessful, or if the situation is deemed a risk to life. Carrie’s desperation and her sense of finding herself at a dead-end attract her to this option, despite being informed of the negative consequences such treatment can have on her cognitive capacities.

In the course of treatment, great importance is attached to the presence and participation of family members and other close friends who can contextualize symptoms and grant them a meaning that resonates with individual identity. They can encourage the maintenance of healthy behaviors, the reduction of risky behaviors and help accommodate phases of greater stability. Such participation can also be an element of training to suitably intervene in crises, after prior agreement with the affected individual. Homeland grants a privileged role to family. The sister is idealized as a mother figure and absent carer, while she also acts as guarantor that the pharmacological treatment is being followed. She is attentive to the phases of instability that can precede a crisis, and offers support during the times Carrie is incapable of fulfilling responsibilities taken on impulsively. The father personifies a figure who speaks from a viewpoint of first-hand knowledge and experience, aware of the disorder’s seriousness and having overcome his most conflictive periods. His is the survivor’s voice, which has been an important figure in the US for many years, and is acquiring increasingly greater prominence in Spain.

Although the capacity for resilience and recovery the individual displays should always be taken into account, bipolar disorder poses significant problems of a diagnostic and therapeutic nature. In effect, among the various episodes, apparently symptom-free, deceptive intervals tend to appear, which may lead to the sudden abandonment of treatment and the appearance of fresh relapses. This is what occurs on the occasions when Carrie abandons her drug treatment because she does not feel the need to keep taking them. This behavior, highly inadvisable in care practice, seems to be linked to the most critical periods of her life and leads to greater psychological instability.

As stated in the Guía de práctica clínica del trastorno bipolar (Practical Clinical Guide to Bipolar Disorder) published by the Spanish Ministry of Health, according to several studies conducted in different sociocultural media, patients with bipolar disorder display symptoms during a substantial part of their lives. These phases with clinical manifestations can cover from a third to half of their lives, with predominance of depressive symptoms. It is therefore essential to treat this disorder longitudinally, knowing that after the appearance and resolution of manic or hypomanic symptoms, the risk exists of a fresh relapse. Between two thirds and three quarters of patients hospitalized for mania will again be admitted for the same cause in the future. The percentage of patients with a single episode does not surpass 15%, while the most frequent percentage of relapses over a lifetime falls within the 7–22% range.

The seriousness linked to bipolar disorder is generally attributed to lifestyle factors associated with it, and to substance abuse, which frequently occurs during or between episodes.

Based on these data, Carrie’s future does not seem very optimistic, though it is true that in her case some of the more frequent consequences of the disorder are not present, such as functional deterioration and difficulty in maintaining satisfactory employment activity. Were such evolution confirmed, it would enable us to trust
in a satisfactory evolution. However, as we see in Homeland, Carrie does not maintain her pharmacological treatment regularly, she consumes alcohol often, experiences continual risk situations and her vital rhythms match the most inadvisable behaviors for reaching affective stability. In the series she remains constantly active, is efficient at her job and recovers from her most critical moments by adapting to new contexts with resolution. In part, this capacity to overcome is related to her character, a true fictional heroine who is capable of becoming larger than life itself. Yet it is also true that there are people who can face dramatic situations thanks to their great personal fortitude. We should not forget that studies monitoring people with this disorder record a (small) percentage of cases that evolve favorably.

In Homeland, description of bipolar disorder symptoms in their different evolutionary moments, of the fluctuation between phases, of pharmacological and medical treatment in general, of the recommendations concerning lifestyle habits and the importance of family participation in the healing process, respond faithfully to descriptions of international clinical classifications and the recommendations in the clinical practice guides in use. As we saw, it is possible to find examples of many aspects of the disorder presented with great coherence. The series also conveys to what extent this disorder can affect different aspects of life, guiding us on the combative attitude that suffers must maintain.

It is likewise true that some of the most invalidating and painful consequences of this disorder are omitted or smoothed over, as shown in clinical practice. Many affected individuals see their lives completely changed and do not manage to overcome the progressive worsening of their personal relationships or their progressive loss of functional autonomy. Behind the apparent dynamism and speed of response that Carrie displays could nevertheless hover her difficulty in regulating her moods or her incapacity to resolve her emotional conflicts, incorporating preparation processes and coping with the suffering they lead to.

The series chooses to convey a message of hope, one that is not always fully justified, but which hints at the chance to overcome the disorder. Nowadays we know that certain well-known figures who are no longer with us suffered from this disorder in their time. We admire them for their historical value and courage in a sustained fight to recover their faculties. Currently, moments of hope are also experienced every time a well-known and respected person makes their disorder known and agrees to share both their suffering and their triumphs with us.

The scriptwriters display a firm sense of balance and sensitivity by presenting a heroine who suffers from a mental disorder that is considered serious, without hiding the more disquieting aspects of her illness. Yet meanwhile they get us to value and identify with her due to her overall personality. Carrie is a competent person, who possesses myriad personal capabilities. She is successful and respected in her professional sphere. She is surrounded by people who love her and worry about her, and her identity is linked to her overall personality, not to her illness. This is now the challenge set by the movement fighting to rid those people suffering from a mental disorder—and by extension their family members and the professionals attending them—of any sort of stigma or discrimination. Carrie prompts no rejection from viewers. Instead, it is easy to identify with her, feel jealous of her successes and share her suffering.

The series lacks a greater reference to the need for integral, structured, integrated and ongoing therapy, which responds to the extreme complexity of a disorder that affects different aspects of life. On one hand, this means mental health, and with it the capacity to tolerate emotional pain, create conflicts and be able to build satisfactory personal relationships, and on the other, physical health in its different dimensions. Nevertheless, Homeland’s great truth, from the viewpoint of disseminating information on mental illness, consists of coherently integrating, without interfering in the plot action, a positive and seductive character who suffers from a serious mental illness without judging her.
Olive Kitteridge and Depression

Oriol Estrada Rangil

HBO miniseries tend to have few rivals in the award ceremonies. There were good reasons why this exquisite, four-episode production, aired in 2014, triumphed at the Emmys, winning a total of eight statuettes. Three of them went to the cast, responsible in good measure for its impeccable results. Bill Murray, Richard Jenkins, and especially Frances McDormand, all help to reflect the personality of a dour woman with depressive symptoms in an objectively bucolic setting. The script adapts the novel of the same name written by Elizabeth Strout, the 2009 Pulitzer Prize winner.

It seems as if the entire world knows what depression is, but very few people truly understand it. It is not unusual at all to hear somebody say they are depressed. It means no more than that they are rather sad for some setback or mishap. Even if in some cases such sadness may be more than justified, in others it is no more than the simple expression of a passing sentiment, a feeling that will vanish once the worrying problem has been solved, or even if the sun comes out the next day. Depression has entered our everyday vocabulary, but that does not mean we are using the word correctly. What is more, in the immense majority of cases we are doing a disservice to people truly suffering from clinical depression.

When Olive Kitteridge explains to her son Christopher what depression is, she describes the sufferer as somebody with “bad wiring”, someone poorly put together. This is merely a figure of speech, far removed from depression’s complex reality, but behind it lurks an idea that is actually based on many psychobiological theories regarding this mental illness. The award-winning HBO miniseries, Olive Kitteridge, which adapts Elizabeth Strout’s Pulitzer-winning novel, perhaps does not aim to place depression center-stage, but thanks to tiny gems such as the aforesaid scene, it is a good departure point for a discussion on how different North-American generations have confronted this illness.

In the original novel, Olive Kitteridge is basically the common nexus by which the stories of several families in that small town of Maine are told, where neighbors still know each other by first and last names. She is not necessarily the protagonist, which is an aspect the TV series has managed to respect up to a certain point. Olive does not take absolute prominence until we reach the last of the four episodes forming the miniseries. This leaves the door open for us to get to know the stories of the people surrounding her, and we realize that depression and mental problems in general abound in the chilly lands of Maine.

One of the first characters introduced is her husband, Henry, ironically the village pharmacist. His first customer is Rachel, who apparently suffers from depression, and she tries to convince Henry to give her more Valium than he should. The pharmacist’s reaction is a good example of how people who truly do not understand depression react to it. First, he advises her to get out of the house, since according to him it is “good to get out when you’re feeling blue”. Henry uses the word “blue”, which can mean both “depressed” and “sad”. His customer replies: “Christ, Henry, blue is what I feel on the good days”. The phar-
macist continues in the same vein, recommend-
ing insistently that she goes to buy light bulbs of a higher wattage, at least until the end of winter when the days get lighter and less gloomy. This scene perfectly sums up the way many people keep treating and (mis-)understanding this disorder. And this customer expresses what many people suffering from clinical depression would scream to the four winds every time somebody tried to jog them out of this state with a couple of well-meaning platitudes, not understanding that the problem needs more than brighter light bulbs and a few strolls around town.

Clinical depression is not simply being down-
cast or sad. Neither does it refer to feelings that one might experience over a work or relationship crisis, or even at the death of a loved one. Problems like these can unleash depression, but despite most people having phases like these in their life, not everybody ends up suffering from this disorder. Clinical depression is a syndrome, a set of symptoms related to the individual’s affective capacity. One in six people will suffer from it at least once in life, most of them from 18 to 44 years old, on average starting at 27. Women are at greater risk of suffering from it, doubling the prevalence ratio of men. Its origin is from multiple factors, or rather that different elements intervene which cause the illness; one of these tends not to be enough, but these factors must occur to-
gether.

It is not easy to diagnose. It cannot be de-
termined by analyzing blood or any other kind of biological markers to indicate whether somebody is suffering from depression. A psychopathologi-
cal, clinical diagnosis must be made, normally based on the directives set in the Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the American Psychiatric Association. This manual describes a number of symp-
toms which, according to their presence and degree, determine whether a person is suffering from any type of depression. So to diagnose a major depressive disorder, the individual must display a minimum of five of the symptoms de-
scribed, for at least two weeks. These symptoms include sadness, dysphoria and irritability, anhe-
donia (which is the incapacity to enjoy or display interest in certain activities), weight loss or in-
crease, insomnia or hypersomnia, psychomotor slowdown or agitation, asthenia (the sensation of physical weakness), recurring feelings of useless-
ness or guilt, a reduction in intellectual capacity and recurring thoughts of death or suicidal ideas. All of this must affect the individual’s social or working life in some way, and must not be related to organic diseases or drug use, nor with habitual grieving for somebody who is deceased.

So is Olive Kitteridge suffering from depres-
sion? She is convinced she is. And it is likely that the DSM mostly agrees with her. Her irritability is something that leaps out –she has very little patience and is capable of getting annoyed over any detail. Anhedonia is one of the characteristics that best defines Olive’s personality, and through-
out the series she shows a (pathological?) lack of interest in any of the things that happen to her. Henry gives her a card for Valentine’s Day, which ends up in the waste. Years later, he gives her another card, simply to say he loves her, and she gives him a hug, displaying possibly the least emotion ever seen on TV. Her son’s wedding is a good example. On a day in which her husband gets emotional and feels happy because his son will be living nearby, Olive is incapable of show-
ing anybody a smile, even telling her son that she hopes the ceremony will be short.

Clearly, all of this affects her capacity to re-
late socially, and many guests feel chastised by her conversations. Yet physically it does not ap-
ppear that Olive has many problems, since she is always busy, whether cooking, tending the gar-
den or working at the high school. However, the only scene in which we see her teaching shows us how strict she is in the detention room with students’ punishments (to give us yet another example of her impossible nature). Even so, we still do not know whether Olive suffers from other symptoms that would be required to diagnose her with MDD. The question is, do we not see them because they are not shown, or because they do not exist?

A better example seems to be the pharmacy customer, Rachel, who is incapable of enjoying anything, who spends her day sleeping on the sofa (hypersomnia), forgets to collect her son
from school (affecting her family life) and needs Olive to come and spur her on to get dinner ready for her boy. It is that incapacity to see the positive side of things, and having the certainty that nothing can improve in future, which best describes the typical patient of depression. And it is not something that will change with a slap on the back and a 200-watt light bulb. As presented at the start, Rachel seems to be the most stereotypical example, though we then see that in reality her problem is even more complex.

What probably is not so well known is the genetic factor, which can play a significant role in the development of clinical depression. Doubtless, ignorance of this factor helps stoke certain opinions and ideas on how depression functions. But Olive, ahead of her time, is clear that a genetic relationship exists. Resuming the conversation on depression with her thirteen-year-old son, she insists that he must know what it is, since his family has always suffered from it. She is convinced that her son will also suffer from depression throughout his life, and the truth is, as an adult he will end up taking Prozac and attending different types of therapy. During dinner, Olive mentions her father, who suffered from depression and ended up committing suicide. Furthermore, she claims that her husband’s mother went through the same. To this, her husband replies that his mother simply “had her moods”. Whether Olive is right, or simply analyzing their parents and son from her own bias of considering herself depressive, is something that viewers must decide by watching the series to the end. But at that point, they table the issue of genetics, the hereditary factor of depression, which is something the series should be applauded for.

Science seems to agree with Olive, and studies of families show that an individual has a greater risk of suffering from depression if a direct family member has suffered or is suffering from it. While the prevalence in the general population is about 5.4%, this increases to 15% for family members with precedents (figures that are, in fact, a far cry from Olive’s grim determinism). Nevertheless, this type of study has a risk, which is that the environmental factor cannot be controlled. Does Olive’s son suffer from depression mainly due to genetic reasons, or because he has led his entire life watching his mother act like a depressive person? Living on a daily basis with somebody who considers that everything is done badly, who barely smiles and makes your life hell, as Christopher recognizes years later, is not the best way of preventing depression from developing. Remember that not everything is based on genes. Many other factors must come into play to unleash a depression, and the social factor is likewise important.

Health sciences have other resources for trying to overcome this obstacle: adoption studies and studies on twins. Adoption studies try to determine to what extent genetics have influence in a specific environment. So a comparison is made between children adopted by a healthy family and high-risk children, those who live with their biological parents and suffer from the syndrome. What has been observed is that children with the genetic factor who have been adopted by a healthy family have greater chances of developing the illness than the general population. But once more, controlling the environmental factor can place this in doubt, so studies of twins seem the best way of determining the respective weight of genetics and environment. In these, the results in different types of twins are compared: monozygotic (who are identical) and dizygotic (who share only half each other’s genes), and one of the conclusions is that genetic inheritance plays a considerable role (present in 40% to 60% of cases). This tends to occur more frequently with serious depressions and mainly in the case of women, but it also occurs in men, especially in those cases in which depression starts at under 30 years old.

Studies on twins also enable environmental factors to be identified that can have some effect on the development of depression. This is an illness triggered by multiple factors, and the genetic or environmental questions alone do not seem to be enough of a trigger. These studies show that certain stressful life events have a causal effect. Some examples are the death of a loved one, separation and even harassment (such as bullying). This means that among identical twins, despite them both having the same genetic risk,
if one experiences certain stressful episodes during their life and the other does not, the former has a greater probability of suffering from depression than the latter. Yet we must emphasize the idea of non-determinism: the fact that one has a genetic predisposition, and even experiences several stressful events during their life, does not mean they will definitely develop depression. Perhaps the clearest example (a somewhat simplistic view, we admit) is that of a lottery: almost everybody has tickets, and some people have many more than others, but that does not guarantee they will win the lottery. So Olive has given her son several tickets, but it is impossible to know whether the winning ticket is among them.

What the series makes clear is that being born and living in Maine guarantees you have a good number of tickets in that lottery. Is this because of the climate? The idea that a cold, dark location such as the state of Maine, with a lot of humidity and not much sun, is the perfect place to develop depression is a widespread literary cliché—and we see little sun in the series. The popular belief that one's surroundings, in the most literal sense of the word, have an effect on one's mood is made patent here. But is this belief true? It seems to be true that winter or fall, the seasons with least sunlight, have an effect on our serotonin levels (the so-called mood or pleasure hormone), and so are periods that are more prone to depression. Seen in this light, it seems that Henry was partially right when he recommended Rachel purchase more powerful light bulbs. In this argument, cold places such as Maine have a propensity for developing the illness. Therefore, the number of individuals with depression would tend to be greater in comparison with other areas with a more agreeable climate. However, in a study conducted in the US from 2006 to 2008, the prevalence of different forms of depression was greater in states such as California and Florida, which enjoy a much warmer climate. In fact, it is precisely in the southern states (Louisiana, Arkansas, Mississippi, Alabama, etc.) where the prevalence of depression is much greater, far surpassing 10%, while in Maine it remains at 7.9%. So if the environment is not always a determinant, we have to fall back again on the genetic question, which could explain why so many people with a depressive disorder are concentrated in the same spot. The typical endogamy of more isolated regions may offer an explanation for this (apart from the author’s choice to set the story there, naturally). Yet as noted, this is a continual sum of factors, and one must not only take into account psychosocial and environmental aspects, but genetic ones.

Olive seems to display some characteristics typical of a depressed patient, yet throughout the series, she is able to overturn our assumptions with some of her statements and behaviors. Perhaps her posture regarding the illness is what locates her more in the terrain of fiction than in reality. She claims she suffers from depression, but this does not seem to constitute a problem—it is rather a feature of her personality. One could say that she even feels happy with it, and has never done absolutely anything to shake off this apathy, or to improve her social relationships. The irony with her husband being the pharmacist is that she has never undergone pharmacological treatment. Furthermore, it seems she has no great love of psychologists and psychiatrists either, since, in her son's words, she thinks “headshrinkers are the devil”.

No, Olive does not seem to be upset at having to live with depression. She goes even further: when talking about the illness with her son, she says it goes with being smart, that only “normal” people are happy and only intelligent people suffer from depression. Ernest Hemingway thought the same, saying it was quite strange to see somebody both intelligent and happy. The idea that mental illness is associated with intelligence or creativity has existed for a while. It even seems to have been demonstrated that certain types of psychiatric disorders (schizophrenia, bipolar disorder) are more prevalent in artistic profiles. But the idea that intelligence and depression have a more or less direct relationship is something that has never yet been fully proven. Some studies claim this is so, while others deny it. Some claim that intelligent people tend to worry more as they are more aware of the dangers in their surroundings, and it is precisely this attitude that enables greater survival. Nevertheless, if we re-
call that US study on depression, we see that not having higher studies seems to have a relationship with the prevalence of depression: the lower the educational level, the more chance of developing it. So concluding that depression is exclusive to intelligent people is still too risky and simplistic. Firstly, because the concept of “intelligence” remains, to this day, a highly controversial subject. The idea that there are different types of intelligence –therefore that we cannot speak of intelligent people but of people with certain intelligences– is gaining increasing relevance. For example, if we speak of emotional intelligence (a relatively novel concept), research shows that, the greater one’s emotional intelligence, the lower the incidence of depression. Meanwhile, another study demonstrated that people with greater linguistic intelligence were more prone to suffer from anxiety or even depression.

The latter quickly prompts us to think of Olive Kitteridge again, more specifically her lover, the literature professor, who she considers interesting, and truly intelligent, and with whom she seems to get on much better than with her husband. The same occurs between Olive and Rachel’s son (Rachel, the depressive customer we saw early on) with whom she deals more tactfully than with her own son. Likewise, this young man seems to understand his literature professor extremely well, closing this circle of intelligent depressives with affinities in the town of Crosby. Shortly afterwards, we discover both he and his mother suffer from bipolar disorder, not depression, reinforcing the relationship between intelligence and mental illness, and meanwhile the genetic question of its development. Are we being sold a romantic idea of depression? I would not go so far, because Olive’s story is anything but romantic. She will tell her husband he is too good for her, and apologize for being a bad wife, recognizing that she has made his life really tough. And she herself, when talking about her father’s suicide, says it is neither a pretty end nor a clean one.

Inevitably, suicide always hovers around depression. In the first scene of the series, we see a very aged Olive heading out into the woods with a loaded gun, ready to end her life. The death of her father is ever-present, as is another, which Olive avoids, of a character whose mother committed suicide. Likewise, the suspicion hovers that certain accidents, one fatal and the other not so, were in fact intended. There is even a conversation in the third episode where the issue of suicide is openly raised as a solution to all one’s problems.

The reality is that, of all those who at some point express a wish to kill themselves, only 10% are successful. In the US around 30,000 people commit suicide every year, but more than 500,000 attempt it. There can be several failed attempts, and a third of them will try again within a year. It is the fourth cause of death in the US, and most victims are from 15 to 24 years old. Speaking of depression, one in six people who suffer from depression try to commit suicide (implying they are unsuccessful). In the light of these data, the degree of effectiveness of the characters in Olive Kitteridge is surprising. As mentioned, in the same series they often talk about suicide. Some see it as a solution, even an honorable way of ending their misery and problems. Olive seems to play with the idea quite disconcertingly. She will defend at some point that suicide is no solution at all to one’s problems, or add that it is a dirty way to go, and always affects somebody negatively, while at other later times in her life, she claims that once her dog is dead, she will have nothing left to do than shoot herself. She says this in an exaggeratedly rational tone, arguing that she no longer has any more roles and so, therefore, her existence has no more meaning for anybody.

Like depression itself, suicide is a complex, multi-factored phenomenon. Purely psychological and social factors may intervene, but it is also explained by neuro-biological processes. Though much remains to be studied on this issue, it seems clear that suicide victims have a low concentration of serotonin, the substance that, as mentioned above, modulates our feelings of pleasure and moods. In the brain, this mainly seems to affect the neurotransmission of serotonin in the prefrontal cortex, the hippocampus, the hypothalamus and the septal nuclei. Among its functions, the prefrontal cortex is in charge of cognitive control and behavior, which, if damaged, can increase impulsiveness and affect our
capacity for decision-making. If to this is added damage in the hippocampus, which controls emotions and stress, and the capacity to recall recent facts, then we have an individual who can lose their capacity to make suitable decisions for the context in which they find themselves. Lastly, damage to the septal nuclei seems to be related to development of pessimistic feelings. Therefore, committing suicide is not normally a rational and premeditated decision, but a cumulus of factors added to each other until they explode. This is why Olive Kitteridge's calmness when planning her own suicide is possibly quite divorced from the reality of a depressive person.

It is not just depression that is closely linked to suicide, but also bipolar disorder (likewise seen in the series), schizophrenia, post-traumatic stress disorder, borderline personality disorder, consumption of alcohol and drugs, and certain stressful facts that may be related to financial problems or interpersonal relationships. It could be one or several of these factors together that end up leading a person towards attempting to take their life. Yet depression remains one of the foremost reasons. It is thought that between 45% and 70% of those who attempt or commit suicide suffer from depression. Even so, it is still only specific profiles among those suffering from depression who attempt it, profiles with violent and impulsive characteristics. It appears conclusive that many suicides go through a period of great anxiety right at the time of making the attempt. Once more, this does not seem to be Olive's case. In the opening scene, she is heading towards the woods and making all her preparations with a certain lack of urgency, as if she were preparing a picnic rather than a suicide.

We have mentioned bipolar disorder several times. Since it appears in the series, and because of its relationship to depression, it is worth examining to some extent. Bipolar disorder is characterized by a series of extreme changes in mood. During certain episodes, some characters feel very happy, extremely happy (a phase known as a manic episode). However, shortly afterwards they get down and go through a depressive episode, with all the features we have described here for depression. In some cases, they can even suffer mixed episodes. These episodes can last between one and two weeks, and occur throughout the day. Rachel, who seems to be the classic depressive patient, later reveals she has bipolar disorder. In fact, this is a common diagnostic error, since many patients only seek help during their depressive episodes.

Bipolar disorder may sometimes be accompanied by certain psychotic symptoms (including hallucinations), and is often diagnosed wrongly as schizophrenia. As a matter of fact, one of the most surreal and striking images in the series is linked to this disorder. At the start of the second episode, we meet the adult version of Rachel's son, Kevin Coulson, who has returned to the town hiding a weapon in his car trunk. Olive, who seems to have a sixth sense concerning matters linked to suicide, ends up getting into the car to distract him. This is when we realize Kevin may have inherited the illness from his mother. Although the only thing we know is that thanks to this, he has studied psychiatry, probably to understand what happened with his mother and what is happening to him. We realize our error here, of having thought that she too was another depressive in Crosby's catalog. Kevin's childhood memories help us understand that more was going on there.

Olive Kitteridge is, for many reasons, a great series, with memorable characters and acting, especially Frances McDormand as Olive. Though she herself, as the series producer, has recognized that at no time did they aim to place depression center stage, it is undeniable that the series invites reflection and even debate on this mental illness (along with others), and how it has been portrayed over the decades. Within Olive's family, starting with her father, continuing with her and ending with her son, viewers are offered three different ways of dealing with depression. We have that absent father, who at 45 years old committed suicide, but who hailed from a generation in which depression was probably not understood. It was definitely not considered an illness, and the only way out he found was to shoot himself in the kitchen. Then we have Olive, much more aware that depression is an illness, and furthermore hereditary. For her, the only thing to do is
go forward and endure. We could even say that she rebels against the illness and does not allow it to take her over, but her means of bearing it seems to be cruel and antisocial. Lastly, Christopher represents the "modern" way of facing it. This is the generation of Prozac, psychologists and psychiatrists, and even of therapy groups. Through these three generations, we have seen a social evolution of mental illness, from not even mentioning it to spending the day talking about your problems with others, as Olive Kitteridge would surely say her son does.

It is important always to bear in mind the context in which mental illnesses are presented, since history has shown that the form of dealing with them has changed a great deal, not just based on medical advances but also about what society thinks of these disorders. Perhaps medicine nowadays is much more advanced concerning knowledge of depression from most of society, and this series helps us reconsider many aspects regarding it, starting with the genetics question.

But is Olive Kitteridge somebody who truly suffers from depression or not? The definitive answer can be found in the final scene of the series, and that scene returns us once more to the start of this chapter, and to rethinking whether the use we make of the word "depression" is correct or not.
True Detective and the Attraction of Evil

Luis Lalucat and Liana Vehil

This thriller in the form of an anthology is a clear example of the rise and fall that TV fiction can undergo from its first to its second season. Created and written by Nic Pizzolatto, the eight episodes in the first season, which went to air on HBO in summer 2014, submerge viewers in a sordid and disquieting investigation being carried out by two antagonistic police officers on a serial murder case. Yet the show drew fans not by the police officers’ investigations, but because of the deep discussions Matthew McConaughey’s and Woody Harrelson’s characters got into. The change of storyline, cast and location it underwent in its second season did no favors to what had been one of the revelation series of the year.

A pair of detectives in Louisiana’s Criminal Investigation Division, Marty Hart and Rust Cohle, are assigned a crime in 1995 that bears markedly strange features typical of a ritual murder. In the course of the investigation, as events are revealed, we see not only their reactions to the crime, but also how the powerful emotional shocks accompanying these crimes affect their lives. This emotional buffeting is exchanged in the context of the complex relationship between the pair.

Years later, in 2012, a new case given to two other detectives reopens the investigation. Marty and Rust, who have left the Criminal Investigation Division, are interrogated separately about the events of 1995. This shows the repercussions those events had on their lives. The situation prompts both men to open a new investigation on the fringes of the official one, leading to identification of the perpetrator, confrontation with him and to the case being solved.

The entire history of film is rich in figures depicting horrific behavior, personified by characters who display psychopathic behaviors, projecting evil onto their surroundings. Such characters populate a gallery of portraits covering extremely diverse makeups, from the psychopath of subtle yet malevolent manners in *The Night of the Hunter* (Charles Laughton, 1955), masterfully acted by Robert Mitchum, the serial killer of *Seven* (David Fincher, 1995) or the later *Zodiac* by the same director (2007), *No Country for Old Men* (Joel and Ethan Cohen, 2007) or the perverse criminal dwelling within Hannibal Lecter in *The Silence of the Lambs* (Jonathan Demme, 1991). Although all of these offer some common features, they also display marked differences in their behavior. The figure of the monster goes back to investigations carried out on serial killers and ritual crimes, covering both the characteristics of the criminals and their victims, as well as their *modus operandi*.

In True Detective, the monster is a serial killer who is described to us as having the qualities of a sadistic and perverse psychopath, or as someone with an antisocial and sadistic personality disorder. In this sense, this person meets most of the behavioral characteristics of serial killers. The killer’s criminal profile includes premeditated behaviors, the use of deceit, a precise choice of victims, a progression in criminal action (kidnapping, torture, mutilation, death) and disposal of the body with a return to his habitual activities. The monster of the series is skillful in his criminal actions, at the same time as he appears to engage in normal behavior in his occupation, which keeps him in touch with the child popu-
ulation among whom he selects his victims. His crimes are planned, always choosing the most vulnerable victim. And he does so in a broad yet identifiable radius of action, in which he carries out his actions of capture, torture and death. In such actions, he furthermore leaves a recognizable trace through unnecessary elements or features in the carrying out of the crime. However, these traces accompany the crime, constituting elements that, in one way or another, enable the same perpetrator to be identified: the tying, wounds and torture inflicted on his victims, the arrangement of the bodies for discovery, and the presence of strange objects around them.

In fact, throughout the season, we only know this character through the result of his crimes, the plot’s unifying thread. The ritual crime that launches the investigation leads to discovering a long chain of murders and disappearances of children and young people that has been occurring over time, all seeming to point to the same author. Nevertheless, the storyline also gradually reveals the direct or indirect participation of other agents. Only at the end of the series is the monster revealed as a flesh-and-blood person, characterized in his living situation by an atmosphere of degradation and incestuous relationships. The sole reference to explanatory or etiological elements in his behavior is expressed in a line he himself pronounces: “You know what they did to me? Hmm? What I will do to all the sons and daughters of man”.

Serial killers have long held a morbid fascination for viewers, and still do. This is partly linked to showing the relationship between an external appearance of normality in everyday behaviors and criminal actions that reveal an absolute disregard for victims. It is likewise to do with showing highly elaborate criminal procedures, in which sadism and pathological sexuality appear together and are shown openly in public. This is especially so, as in the case of True Detective, when the victims are children and young people.

This type of behavior has been investigated for years, both from the police and forensic examiner’s perspective as from the psychiatric viewpoint. American studies state that 1% of homicides committed in the US are performed by serial killers, and even go as far as estimating there are 150 to 300 serial killers in that country. So they constitute a significant social and criminological phenomenon, even if their clinical classification remains under debate, despite a definition of the clinical symptoms having been arrived at within the sample of criminal psychopaths as far back as the 1940s. Obviously, this is a controversial question, since inclusion or not within psychiatric classification of psychopathies and personality disorders also concerns the legal imputability of the criminal acts and behaviors of such subjects.

Equally controversial is identification of the etiopathogenesis of such disorders, in which it is difficult to define to what extent the biological, psychological and social components intervene in the genesis and maintenance of such criminal psychopathic behaviors. While participation of a psychogenic component based on childhood experiences of situations of physical and sexual maltreatment and abuse is generally admitted, the absence or distortion of such social and affective bonds also appears to be relevant, related to acquisition of the necessary emotional maturity, capacity for relationships and constructive exchanges, as well as the incorporation of social values. The line the monster uttered above seems to refer to a vengeful attitude, in response to humiliations, maltreatment or harassment suffered in his childhood.

The other side of the coin is represented by the victims, children and young people who have been kidnapped, tortured and killed. The series shows us just one case that did not lead to the victim’s death, since they manage to rescue the victim at an advanced stage of the process. Immediate and long-term serious psychological consequences are shown as the victim’s incapacity to develop psychologically and emotionally. Years later she lives shut away in a psychiatric institution, and displays the mental functioning of disconnection characteristic of autism. This framing of the character speaks of the serious consequences that may foreseeably stem from an extreme, prolonged traumatic experience on the still-forming mind of a child or adolescent. For all the above reasons, the figure
of the serial killer, such as we have analyzed here, becomes configured in the collective imagining as the representation of evil. Productions that depict the figure of the psychopath, the serial killer and the monster tend to present viewers with characters or antagonists who constitute a counterpoint, in the shape of common personalities, who in contact with the lead characters reveal new aspects of themselves. In this interaction between these two contrasting characterizations, not only the protagonists’ lives but their minds are affected. This likewise occurs in True Detective, so we will try to include it in the analysis we conduct.

It is commonly accepted that exposure to traumatic events generates psychological consequences in the exposed subjects, and clinical history offers numerous examples of such situations. People who have been exposed to a traumatic event, whether experiencing it themselves, witnessing it, or recognizing its consequences, receive a psychological impact. This is still greater when deaths or threats to physical wellbeing have occurred. Each person responds to the event in a different way, according to their own psychological makeup, but a certain degree of fear will habitually have been generated, a hopeless response, or they will have experienced intense horror. The psychological consequences possess a certain specificity, linked to their memory, making themselves felt in dreams, or in maintaining a persistent psychological— and sometimes intense— unease with everything related to the traumatic event. Some symptomatic manifestations of such consequences are shown in physiological alterations that can affect not only sleep and appetite, but habits and behaviors.

True Detective shows how contact with a crime of special characteristics acts as a traumatic event that affects the investigators in charge of investigating it. Below, we will analyze in what way the series presents the psychological characteristics and certain psychopathological elements of the main characters, Cohle and Hart.

Cohle is described in the series through his behavior and comments about himself, and the opinions of others interacting with him. Yet it is necessary to store all these descriptive elements in the information he provides us regarding his life story and reactions to different significant life events. It is relevant to consider an initial block of events and their evolution since childhood. He is the son of an affair of his mother’s with a soldier on leave. She abandoned both the father on his return and her two-year-old son. Father and son move to Alaska, where they live in an isolated situation, until Cohle decides to return to Texas. There, he marries and has a daughter, experiencing family life for the first time. The accidental death of his daughter ends his marriage in a destructive emotional context for the couple. Once more he experiences abandonment through his wife leaving. His daughter’s death, both the fact itself and its consequences on family and himself, seems to become a determining event in his later evolution. A job transfer from the Larceny division to Narcotics begins his descent into hell. Living undercover for four years among drug traffickers, he begins abusive substance use, takes part in violent acts, causes several deaths and reaches a borderline situation, causing him to be admitted to a psychiatric hospital. The diagnosis remains unclear, since he says that “for a long time after, I... I didn’t really sleep. Nightmares, PTSD, exhausted nerves, whatever”. The description of his state prior to admission is compatible with the clinical symptoms known as post-traumatic stress disorder (PTSD), understood as a set of individual reactions to exposure to intense stress factors. This presupposes a one-off or ongoing, intense, emotional reaction to one or several such factors, for a brief or prolonged period. The point of departure may be situated in the death of his daughter and later family decomposition, when presumably a process of identity was being initiated at the family’s core, creating the corresponding affective bonds, a sense of responsibility and participation in a shared project. This loss does not lead to full grieving, and the couple’s consequent rupture prompts him to act in an ever more precipitate and self-destructive fashion, repeatedly putting his own life at risk.

Once he is released from hospital, he refuses an offer of retirement on “a psych pension” and asks to be transferred to the homicide division. So he chooses to rejoin the police force, to once
more form part of a group, playing on the duality of identity and belonging. In his new job, the case he and Hart are assigned activates the character's main conflicting cores afresh, centering on the loss of his daughter, and giving him a need to get to the heart of the matter, to solve the case so as to face his own conflicts. The successive discoveries he will make, the appearance of new criminal cases committed against children, once more bring to the fore his inner conflicts, leading him to act increasingly more obsessively, so that he will start to disregard any legal or moral limit that might curb his own behavior. He thus repeats his behavior from the time when he worked undercover in the narcotics squad, including substance abuse and participating in violent actions. His disciplinary suspension from the force leads him to follow a path towards increasing isolation in which he pursues his own individual investigation, meanwhile establishing a continued pattern of alcohol consumption that is abusive and self-destructive.

Throughout the narration, references appear to the perceptions Cohle has at different times, formulated as a perception disorder known as synesthesia. He defines it as “a misalignment of synaptic receptors and triggers… alkalis, colors, and certain metallics. It's a type of hypersensitivity. One sense triggers another sense. Sometimes I'll see a color and it will put a taste in my mouth. A touch, a texture, a scent can put a note in my head.” Nevertheless, in a certain scene a perception appears that insinuates hallucinatory content, as when, from the car in which he is traveling, he sees a girl waving at him, leading him to ask Hart if he believes in ghosts.

Cohle sustains his life continuity in a life philosophy that gives him a certain rationalization, stability and strength to face his own self-destructive impulses. He bases it on relevant authors and texts, summarizing as: “I’d consider myself a realist, alright? But in philosophical terms I’m what’s called a pessimist. ... Means I’m bad at parties.” He believes “human consciousness is a tragic misstep in evolution. ... We became too self-aware ... programmed with total assurance that we are each somebody, when in fact everybody’s nobody. ... And I lack the constitution for suicide.”

The resolution of the case, in a fresh collaboration with Hart, seems to open up a new life perspective for him, as if he had finally managed, for the moment, to break the infernal cycle his life had become.

The series presents PTSD in a manner similar to habitual diagnostic descriptions and classifications, but one should not forget that this diagnostic has very broad margins of application. It arose after the Vietnam War to respond to the many cases of soldiers who displayed the psychological and emotional consequences that fighting in the war had caused in them. It was formulated as a diagnosis to group reactions that showed certain similarities. Even so, the effect of war and the traumatic experiences suffered always has an individual background due to each individual's life baggage, and is expressed in differing intensity, characteristics and recovery capacity. True Detective seems to place the final accent on capacity for individual recovery, despite the succession of traumatic events, and their intensity and duration. It also focuses on the way they affect the character. Perhaps too, they put one in mind of another evolution, more of a definitive collapse, or of prosecuting risk behaviors that lead to him recognizing he is incapable of committing suicide.

Meanwhile we would emphasize that the series does not provide any information on the treatment or treatments Cohle undergoes during his hospital admission, though it is plausible to assume that he was on a detox program linked to the substance abuse and addictions that resulted from his time in the Narcotics division.

Let us now look at the character of Hart, an individual with no special biographical background worth mentioning. As the series opens, he is married with two daughters, and his family situation seems to be following a track displaying no significant elements. However, winds of unease appear to be blowing in the figure of his wife Maggie. This family environment will be progressively affected by Hart’s involvement in the case he has been assigned. The character’s slow involvement in a storyline full of dark aspects, which gradually reveal a chain of ritual crimes whose victims are the young and the innocent, little by little increase his emotional tension. This experience ends up
causing him to indulge in compensatory behaviors, such as drinking more, and marriage infidelities. Both sorts of behavior seem to have the aim of an emotional release for him, but also of family preservation. However, they end up unleashing the opposite effect: a distancing from his family, about whom he is less and less concerned, and Maggie leaving, because she does not accept his affairs. Likewise, his behaviors in and outside the home become increasingly violent, particularly when he kills a detainee, as well attacking two young men in the police station who had been having sex with his adolescent daughter. This situation goes through two different phases. In the first, Maggie throws him out, and only accepts him back after he has undergone a process of giving up alcohol and attending relationship therapy. However, a new affair leads to their definitive break-up as a consequence of Maggie’s conscious choice to be unfaithful with Cohle in a situation she provokes. Later it is revealed that she manages to re-orientate her and her daughters’ lives in a new marriage, from then on appearing as Mrs. Sawyer.

Hart’s character does not display precise psychopathological characteristics, but personality traits that in habitual contexts rather characterize him as a person with social skills, who is funny and quite an extrovert. He has no particular interests beyond his family life and social relationships, both in and outside work. Nevertheless, subjected to a stressful situation, as occurs with the investigation to which he is assigned, he starts a process whereby his emotional tension progressively rises, and increasingly violent behaviors appear that compromise his family project. The increase in emotional tension due to the investigation and the discoveries as they are revealed leads progressively to a situation of a lack of control and non-governing of his own behaviors, which are increasingly orientated toward obtaining immediate compensations through the consumption of alcohol or extramarital sexual experiences. These are elements he describes as essential, or rather, as the result of a need to awaken his mind and get some relief.

In any case, the series shows us in what way a progressive stress situation, such as confronting a series of ritual crimes in which children have been maltreated and murdered, can affect the mental and emotional balance of a “normal” subject, unleashing a series of behaviors that end up destroying the life project that this person has been building.

The series’ development reveals a well-formed narrative. Nick Pizzolatto’s script shows a consistent narrative thread that gives coherence to the whole of the production, in particular in relation to the lead characters’ psychological characteristics. They offer us descriptive elements of his personality traits and biographical data on which his behaviors and reactions may be based. The evolution of events and the protagonists’ involvement and behaviors maintain a clear connection with the opening scenes and their biographical background.

The references to clinical and psychopathological aspects fall within the acceptable margins of professional descriptions. In this way, they help to understand the behaviors and to offer an understandable view of the responses of the individuals subjected to especially stressful or traumatic conditions, both in the personal and professional sphere. On the whole, the series enables a humanized approach to the characters and a certain degree of identification with them, attuning to their transformations and suffering. This means that even their most unsuitable behaviors or psychopathological references do not have a stigmatizing effect.

The scarce references to therapy procedures in the series does not enable an evaluation of their suitable or correct nature, though at certain moments explicit mentions to couples therapy, detox measures or therapy groups appear.

The series analyzed provides a description of evil through criminal behaviors of diverse natures, the product of a serious personality disorder in which the notion of rules or limits does not exist. Only the satisfaction of one’s own desires and needs prevails, linked to perverse content. Neither does the character have the notion of guilt as an element in the service of self-control and reparation. Evil is also depicted as an expression of revenge and as a path that leads to confrontation culminating in self-destruction.
Nevertheless, what is perhaps worth highlighting from the series are those figures that, departing from different personal characteristics, are attracted to and even fascinated by the evil they have come across in their professional lives, in its specific manifestations, which the case is investigating. They are characters both fragile and also provided with the necessary strength to equip them to rebuild their lives and create fresh personal projects. They are capable of being reborn through their confrontation of crime and violence, and of building a contention dike via healthy relationships in order to evolve toward those milestones that carry them toward their life goals. We would also stress the importance that the series grants the relationship between both characters: highly conflictive at different times, but which plays a significant role in their personal recovery. The friendship that binds these characters exists within a relational and affective framework that endows them with humanity, enabling them to develop capacities for each of their recoveries, and on which their capacities for resilience also lie.
Polseres vermelles and Cancer

Pere Gascón i Vilaplana

This Catalan production, created in 2011 by Albert Espinosa and directed by Pau Freixas for TV3, is one of the few that has successfully made the leap, first to Spanish national TV (a dubbed version aired on Antena 3), and later, thanks to Steven Spielberg, onto the complex international circuit. He decided to adapt it for the US market, but with scant success: Red Band Society founded in its first season from poor audiences. Nevertheless, this series about a teenage gang formed in a hospital’s corridors is an undeniable success; it became a true phenomenon, reaching beyond the limits of the small screen.

Polseres vermelles (Red Wristbands) is a TV3 series created and written by Albert Espinosa, and directed by Pau Freixas. It first went to air in 2011. The original script is based on the novel El mundo amarillo (The Yellow World), of which Albert Espinosa is likewise the author. The series, which falls within the medical drama genre, lasted two seasons with a total of 28 episodes, 13 in the first season and 15 in the second. It tells the story of six adolescents between ten and 17, who are all staying in the pediatrics ward of a hospital where they have been admitted for different illnesses: two have cancer in their leg bone, a type of cancer requiring amputation as part of the treatment; another is in coma; a fourth has a heart problem; a fifth has Asperger’s syndrome, and the sixth is a girl who suffers from anorexia nervosa. These are the main characters. Other young patients, suffering from various illnesses, make appearances throughout the series. They include one with leukemia and a girl with breast cancer, but the latter two do not belong to the Red Band Society. One of this series’ quirks is that children or adolescents dominate the entire action. Doctors appear when necessary, but do not take the initiative and, to a certain extent, always trail behind the young peoples’ activities. The term “red band” comes from the red wristbands that are attached to patients’ wrists when they enter the operating theater or are given blood transfusions.

Despite the fact this is a drama and describes the day-to-day life of these young hospital in-patients in detail, the series is infused with humor and constitutes a true homage to the values of friendship, companionship, life and the desire to live it—to get cured so as to enjoy it. All these ingredients are treated with great sensitivity and an exceptional degree of tenderness that means that practically all the episodes contain scenes, situations and actions that ensnare viewers in such a way they manage to cause an emotional impact.

So what is an oncologist’s impression of the series after having watched all 28 episodes? Perhaps the simplest way of approaching the subject I have been assigned is to identify the series’ different medical aspects and analyze them one by one, from the perspective of cancer. So I will analyze the setting where the action takes place, the hospital, and its health personnel: doctors, nurses and orderlies. How do they relate to the patients? What is their attitude to cancer, especially when faced with a patient, in this case an adolescent with the disease? What support do they offer the patient to continue his or her daily life while undergoing treatment? Do staff indulge in dramatics, or present the reality, however tough, and help patients to manage it? Since it is a fiction, parallel storylines obviously appear that are not necessarily concerned with cancer.
Let us start with the hospital. At first, it seems like a children's hospital, but immediately adult patients appear who speak to the children and adolescents in the pediatrics wards. To thoroughly confuse viewers, at one point in the series, a family member of one of the adolescents is admitted to ER for birth pains and gives birth in the same hospital. Nowadays this type of hospital no longer exists, at any rate not in Spain. Since child and adolescent pathology is so different from adult pathology, and even cancer types do not match adult types, children's hospitals have been created. Another aspect of the series that does not follow hospital regulations is mixing patients of different sexes in the same room. In the series, this occurs twice. A teenage boy with bone cancer and a young girl with breast cancer are put in the same room.

As was mentioned in the introduction, only four of the characters appearing in the series have cancer: Lleó and Jordi, cancer of the tibia; Rym, breast cancer; and a young boy with Down syndrome who has leukemia. Only two belong to the Red Band Society, Lleó and Jordi, who require amputation of the leg. The treatment, from the medical viewpoint, is quite correct. Luckily, nowadays, most adolescents can avoid amputation of the leg through a combined treatment of chemotherapy, radiotherapy and surgery.

It should be noted that one goes into hospital in a mental state that is highly conditioned by one's illness. You are living in a strange setting, with a huge emotional impact, and your emotional state undergoes many fluctuations depending on the results of tests and treatments. A patient affected with cancer realizes, perhaps for the first time in their life, that they are vulnerable. It is a state they have entered in a matter of a few days or even hours, and because of this they begin to realize they might die. Even so, in the series little is said, or said openly, on the subject. This could be because it is an adolescent community that has difficulty comprehending the true meaning of that irreversible loss called death. This aspect is exemplified in the words of Lleó's sister, when she comments that she always thinks and is afraid of the fact she might lose her brother. She declares that although her brother never talks about this subject it would be good, sometimes, for someone to stop being so politically correct and to talk about death, to discuss it openly.

Fortunately, nowadays many people win the battle against cancer and can often discuss it normally. This was unthinkable just three decades ago. There are also patients who want their condition to be explained clearly. This is Lleó's case. He gets irritated because he thinks that life has not treated him too well and confronts the doctor when the latter tells him that his disease has returned again upon finding a spot on his lung:

− “A spot on the lung? You mean it's a tumor, right?”

− “Yes, of course.”

− “Well, fuck, call it a tumor! I'm sick of doctors befuddling me. I don't want to receive any more treatment. Twenty-three cycles are enough. That much chemo is going to leave me sterile.”

This is the attitude of an adolescent who is battling between life and death, and has lost a leg. Now it appears the tumor has become resistant to chemotherapy. Nevertheless, he is worried about becoming sterile, not about death. He refuses to think he might die, but obviously thinks about it constantly. One scene in the series also exemplifies the stigma that having cancer represents for many patients, and for adolescents in particular. Lleó says to Jordi: "We have to be brave when we leave the hospital and not be worried they might see us as legless". This “shame” of how they might be seen occurs more frequently than we might imagine. It should not be like that, since the disease is not the patient's fault. It is partially the sign, the manifestation that “I have or have had cancer”: the amputation of a leg, the amputation of a breast. But it is also a problem of image and self-esteem. If this is tough for an adult, imagine what it must be like for an adolescent.

Another aspect the series deals with is denial, represented by Jordi. A lump appeared in his armpit a year ago. He does not tell his mother or
visit the doctors in hospital, though they told him that at the slightest sign he should go and see them. He thinks or wants to believe that it is nothing. This is a very common attitude, denying the symptoms, the signs our body gives us, which we often try to justify with many absurd excuses. Denial is a very typical reaction in people who suspect deep inside that those anomalies could be the appearance of cancer.

One aspect that in my view is not dealt with carefully and lapses into stereotypes, is the vomiting and nausea induced by chemotherapy. Even if this was true over 20 years ago, we can now say that medication exists that has practically eliminated these secondary effects which gave chemotherapy such a bad press. While it is possible for someone to vomit during the first cycle of chemotherapy, if there is good doctor/patient communication, the treatment pattern can be modified to avoid vomiting and nausea in later cycles. We must overcome this stigma about the treatment because it does not help patients. Chemotherapy has other adverse effects, but nowadays vomiting is very well controlled. I would like to stress this because this association of chemotherapy and vomiting means many patients begin to vomit the moment they see liquid going into their veins, believing it is chemotherapy when in fact it is only the initial saline solution, or anti-vomiting medication.

An important theme in the series concerning cancer is that of respecting the patient’s decision. This is exemplified in the episode where the doctors tell Lleó that his illness has spread to several parts of the body and he only has a 3% chance of living. He decides to throw in the towel, to go off chemo and leave hospital to live the time remaining him freely. The doctors tell him:

- “You know that if you go off it, you will definitely die?”
- “Yes, I know, but I don’t want to die in captivity. I want to be free as I am, but free.”

The two doctors who have told him about the relapse and the seriousness of the situation act correctly and humanely, avoiding a situation of dysthanasia (artificial extension of life). They look at each other and one tells the other, “you never have a solution for everything”, after hearing Lleó’s answer that he wants to reject any other treatment. This is an aspect to bear in mind in oncological treatments. We all want the patient to keep accepting treatment, but sometimes the doctor must perform an act of humility and accept that they can no longer help the patient actively. So perhaps they must accept that the time remaining to the patient is spent with the optimum quality of life they can provide. In this sense, Lleó is brave and decides he wants to be free, even if only for a short time. He is absolutely entitled to think and act in this way, and the doctors accept that decision.

The case of Rym, suffering from breast cancer, is very well dealt with from the oncological viewpoint. She looks in the mirror before going into surgery and, in homage, carefully examines the breast she will never see again. The doctors tell her what the operation will be like and what will happen afterward. She is a strong girl and accepts this stoically. Doctor/patient information and communication is fluid, normal, and the aspects of the cancer are touched upon with the seriousness the situation demands, but without dramatizing at all.

The doctors’ explanatory dialogs with the adolescents’ parents and with the patients themselves are also very well scripted. There is time for explanation and comment in a relaxed atmosphere.

Conclusions

In conclusion, this series has been produced with exquisite sensitivity, using talented adolescent actors. The subject of cancer is dealt with naturally, without sacrificing the disease’s seriousness at any time. Throughout its 28 episodes, it covers the aspects of the patient/doctor relationship and how the news is given to the patient and his or her family environment. All this is dealt with very correctly in medical terms. Cases of denial of symptoms or diagnosis are shown, while the patient’s desires are accepted, and dysthanasia is avoided. The term “cancer” and its contents
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are de-stigmatized. The series does fall into the stereotype of associating chemotherapy and vomiting, a situation that is less common all the time, dramatization of which does nothing to help future patients who must undergo anti-cancer treatments based on chemotherapy. The series is set in a hospital atmosphere where life or death situations occur in each episode. Therefore, how characters and dialog are dealt with is significant, in a setting where, though superficially it appears that everybody is happy, in truth there is a controlled degree of continual tension, which peaks at a certain point in the series.

The series is an ode to the humanity we all carry inside, to friendship, companionship and the treasure of being alive. It constantly moves in this biological and mysterious balance between life and death that can sometimes be cruel because it functions like Russian roulette—a game of chance one has not entered, but in which one nonetheless draws the short straw. They may have drawn illness or health, enjoyment or suffering. The series has an extraordinary educational component in terms of instilling values in children and adolescents. I stress this because, unfortunately, this effect is being lost and becoming diluted in the great mediocrity of many of the programs that the communications media offer us. “Don’t be an egoist. Life is not just yours but belongs to everyone who loves you as well”, says one patient to another. The line reminds us how far we are from such simple yet undeniably powerful values. The series offers a little of everything, despite being a drama in the fullest sense. It emanates both tenderness and harshness, joy and suffering, in a similar way to the daily patterns of our lives. It is little wonder that the series has attracted such a powerful following among young people, but we know it has also managed to move older people deeply as well.

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