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Awakenings (1990): The epidemic of children who fell asleep

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Summary

The film *Awakenings* is testimony to the dream of a neurologist who transiently gave back "freedom" to his post-encephalitis patients, paralyzed by Parkinson's disease for decades, treating them with what was considered a miracle drug: L-dopa. These awakenings opened his eyes to the tragedy: the passage of time that not all of the patients could admit to having lost. The dichotomy between the benefits and adverse side effects, however evident they seem, is a difficult area in the doctor-patient relationship. Both must accept the reality of the situation. The film is indeed a masterful depiction of medical ethics and of the value of existence.

Keywords: Encephalitis Lethargica, Postencephalitis Parkinson's Disease, L-dopa.

Technical details

Title: *Awakenings*
Country: USA
Year: 1990
Director: Penny Marshall
Music: Randy Newman
Screenwriter: Steve Zaillian. An adaptation of the book under the same name by Dr. Oliver Sacks. Based on a true story.
Cast: Robert de Niro, Robin Williams, Penelope Ann Miller, Julie Kavner, Ruth Nelson, John Heard, Alice Drummond, Judith Malina, Barton Heyman, George Martin, Anne Meara, Richard Libertini, Laura Esterman, Dexter Gordon, Jayne Haynes, Gloria Harper, Keith Diamond, Marie Catherine Wright, Mary Alice, Gwyllum Evans, Steve Randazzo, Anthony J. Nici and Max Von Sydow.
Color: Color
Runtime: 121 minutes
Genre: Drama. Melodrama.
Production Companies: Columbia Pictures Corporation

Synopsis: The victims of an epidemic of encephalitis lethargica that broke out in the twenties have been progressively reduced to a vegetative-Parksinsonian state in a hospital for the chronically ill. Years later, in 1969, Dr. Sayer (Robin Williams) uses one of his patients – Leonard Lowe (Robert de Niro) to test a new drug -Levo-dopa- able to "revive" him. He then decides to use it on other patients.
Awards and nominations: Oscar nominations (1990) for Best Picture, Best Actor in a Leading Role (Robert De Niro) and Best Writing, Screenplay Based on Material from Another Medium. Awarded the Scriptor Award in 1991.

Cinematographic analysis

In the credits, we learn that the film is set in the twenties of the last century, with scenes from the life of Leonard (Anthony J. Nici) a studious child who has to stop going to school owing to the appearance of tremors in one of his hands. In the next scene, portraying a jump in time, we are in 1969. Dr. Sayer (Robin Williams) has become a neurologist at the Bainbridge hospital for the chronically ill. He is an

absent-minded person who does not get on with other people and has no family of his own. The hospital where he works is reduced to long corridors filled with statue-like patients confined to wheelchairs, and activity wards where the people sit around vacant-faced. The atmosphere is claustrophobic, with bars over the windows that appear not to have been opened in years.

Dr. Sayer is obliged to familiarise himself with the case reports and with the support of the chief nurse, Eleanor Costello (Julie Kavner), he discovers that all the patients had had encephalitis lethargica in the twenties. He is shocked by the words of the eminent doctor, Peter Ingham (Max von Sidow), when he is told that the patients are *children that just fell asleep* and that they cannot think. Sayer, who is sceptical, doubts this. It is here where the images and action in the film begin to accelerate. The doctor offers Lucy Fishman (Alice Drummond) a complete visual field by painting the floor tiles to help her get to the window; if not, *there is nothing to entice her to move* (figure 1). He then meets Mrs Lowe (Ruth Nelson), who looks after her son Leonard Lowe (Robert de Niro), now an adult, whose electroencephalogram shows that his brain activity is sparked when he hears his name. Dr. Sayer is right: his patients are *alive inside* (figure 2).

Figure 1: A patient, Lucy Fishman, slowly manages to walk towards the window.

This is the first of a series of similar scenes in which, on-screen, the discovery of the patients' responses is accompanied by more light and movement:: groups of patients playing ball; the different styles of music able to induce Rose (Judith Malina) and Bert (Barton Heymqn) to eat, or Frances (Jane Haynes) to react; readings that capture the attention of Roland (Dexter Gordon); card games encouraged by a nurse who deals the first card of a game in the case of Miriam (Anne Meara), or the human contact that allows Frank (George Martin) to walk without stopping and starting (figure 3). It is then when Leonard, spelling the word *Panther*, by Rainer María Rilke, with a ouija board tells the doctor how they feel: *Their eyes (….) cannot see anything else, (…) it's as if (…) there were no world behind these thousands of bars.*

Figure 2: Leonard Lowe before awakening, accompanied by his mother

The next part of the investigation, and of the film, which accelerates in parallel with the discoveries, involves the use of Levo-dopa as a possible treatment for the patients. After attending a conference, the Director of the hospital -Dr. Kaufmann (John Heard)- allows Sayer to use the compound, but only on Leonard, and after getting permission from Mrs. Lowe. After testing several doses, the last one of which is very high, Leonard wakes up exactly half way through the film, awakening (if the reader will pardon the pun) a broad series of emotions in the spectators. At one moment, Leonard discovers a photo of himself taken 30 years previously and suddenly realises the number of years of his life he has lost. This grieves him deeply, but with the help of Sayer he adapts to the personal and social changes that have occurred during that time.

The emotional scene in which he wades out into the sea to the tune of a rock and roll song is an example of his being alive and well (figure 4). The clearest confrontation between two opposite situations is seen when Leonard discovers that the doctor, from being isolated from his body as he has been for 30 years, is terminally shy of others and of developing social relations, and tries to get him interested in Eleanor.

Figure 3: Other patients - Rose, Bert, Frances, Roland, Miriam, and Frank

The doctor receives money to obtain the drug for the rest of his patients. One night, as though it were a miracle, they all begin to wake up and walk. Sayer becomes a satisfied man. He looks with fondness upon Leonard, who enjoys seeing his peers back in the world. This is the second climax of the film; the extent of the success.

The next scene is chaotic. Whereas previously life had been calm and quiet in the post-encephalitis ward, all is now hustle and bustle; almost alarmingly so. Miriam runs through the ward chased by a nurse who wants to take her blood pressure. Rose, who used to lead an active social life, asks for make-up and dye for her hair once she realises the present state she is in from her image in the mirror. Frances, who has a strongly aristocratic bent, asks Dr. Sayer to prune the fruit trees because she doesn't like them the way they are. Bert, fed up with the hospital food, asks for a special menu. Roland hums a jazz song, fuelling what seems to be a passion for him (figure 5).

Figure 4: Leonard wakes up after 30 years thanks to L-dopa

The joy and the awakenings are celebrated with a trip. Leonard, by contrast, goes to the hospital refectory and starts talking with Paula (Penelope Ann Miller), a young woman who had drawn his attention earlier on, and makes friends with her. Meanwhile, his companions go back on a visit to some botanical gardens and prefer to go dancing.

For Rose, happiness continues and she receives a visit from her friends: Miriam, relieved, finds out that her husband had been granted a divorce many years ago; Bert shows that he is well versed in cars… but on the other side of the balance is Lucy, who asks Sayer to allow her to leave and Frank, who finds himself alone, *old and swindled* at the many years of life and the friends he has lost. We glimpse that something is going to happen: signals that the drama has not yet been resolved.

The scenes of light begin to revert to penumbra when Leonard is unable to sleep and he

calls Sayer because he wants to talk about *things that matter*: people must be reminded about the miracle of being alive. He asks the hospital authorities for freedom to come and go as he pleases: *to have the choice to go for a walk any time I want to*. When refused, he tries –unsuccessfully- to leave the hospital. Leonard the starts to make strange, repetitive movements and manages to incite a ward full of psychotics to confront the hospital staff.

Figure 5: The other patients experience their own awakenings

Dr Kaufmann, as the voice of experience and conscience who is present since the very beginning of the film, although has not appeared until now, makes Sayer see that this is not a sign of release; instead, it seems that the L-dopa is not working.

Sayer visits Leonard in the ward for psychotics and eventually admits that things are going worse. He explains to Leonard what he feels and what he thinks is due to the effects of the drug but Leonard does not want to admit this and even attacks the doctor, saying *you're the one that's asleep*. Sayer warns him that he can get the drug withdrawn and Leonard reacts by shoving him up against the sides of the ward. This scene, which is fast-paced and violent, marks the descent from the summit of the film. That night, Leonard still cannot sleep, almost immobilised by so many tics (sudden, rapid, nonrhythmic, stereotyped, involuntary movements) or exhaustion, and realises that Sayer is the only one who can help him. The other patients become alarmed at Leonard's reaction to the drug and fear the same luck: *And if it's just a question of time for the rest of us?*. They are also closer to reality; they are aware of the times they are living in and that things will not always be like this.

Sayer begins to treat Leonard with increasingly higher doses, but he merely becomes ever more paralysed. The situation is: *Nothing…I'm not a person any more, just a collection of tics*. It seems that his involuntary movements and the crises, seen by Sayer himself, are taking over his body.

The spiral downwards leads us to the beginning of the drama again: it seems that all that had gone so well before is to no avail. Leonard is no longer able to read and believes that he has disappointed everyone, at which point the camera situates us immediately behind the actor, facing Dr. Sayer, allowing us to participate in a frontal shot of the scene (figure 6). Even Mrs. Lowe thinks that her son is *losing* the struggle. Anticipating the end of his awakening, Leonard says goodbye to Paula and they dance together for the last time in the dining hall. Again, he loses his ability to write and again becomes dependent on the care given to him by his mother. Again, he becomes a statue.

The following scenes are indirectly destined for the viewers' eyes, who are now searching for the best ending to the film. Sayer, deeply saddened, returns to the video of Leonard that he recorded. Eleanor reminds him that he is suffering because he is a friend. It is consolation from one of the characters and from the drama itself.

Sayer goes to the Board of Directors of the hospital and at the same time we see shots of the patients that have most appeared in the film immersed in a state resembling their earlier catatonia. He explains that it is necessary to limit the miracles and, against the future disappointment, he says that they

Figure 6: Leonard confesses to Dr. Sayer that he believes he has disappointed them all

have to look for another awakening: *The human spirit (…) and that is what needs to be nourished (…) these are the things that matter; this is what we'd forgotten*. Yet another night and Eleanor is saying goodnight to Sayer and he invites her to have a coffee. We see that finally in his life there is room for a friend: something that undoubtedly Leonard drew out of him.

The final mention of the fate of the inmates, as a film based a true story, tells us that new treatments were tested and short-term awakenings were achieved. The film ends with the voice of Sayer, saying *Let's begin*. The word skilfully summarise the whole film, because it is always necessary to reinvent.

The reflection of the illness

Aetiology. Encephalitis lethargica (EL; epidermal encephalitis, Von Economo disease; sleeping sickness –USA) appeared as an epidemic of a polymorphic neurological disease between 1916 and 1925. Its onset was generally accompanied by pharyngitis accompanied by sleep alterations, motion disorders –due to chronic motor sequellae- in the form of post-encephalitis Parkinson's disease and psychiatric disturbances. Despite the temporal association of EL and the 'flu outbreak in 1918, analysis of the brains of affected people did not show any RNA fragment that coincided with this aetiology[1].

Von Economo warned that it could be due to a causal virus that had never been eradicated; one that had remained in a latent or non-virulent state, and one that would re-emerge time and time again along history[2]. Owing to this viral aetiology, in the 1970's it was proposed that vaccination of the population against 'flu might in turn prevent Parkinson's disease[3]. Even today in the twenty-first century attempts have been made to combat EL with vaccines, such as that designated Rosenow, considering the causative agent to be viridans group streptococci, or the so-called Levaditi C (formerly Gay F), more effective, if the aetiological agent proved to be herpes simplex virus[4]. Other possible causes are some variety of bacteria that would produce a neurotoxin, or an environmental toxin, or an illicit or legal drug with side effects for the brain[5]. Some hypotheses indicate that the antibodies induced after bouts of infection by *Streptococcus pyogenes* cross-react with the components of the basal ganglia, responsible for these psychiatric disorders and motor failures. This idea is based on the presence of such antibodies in several similar pathologies (Sydenham's chorea and PANDAS)[6].

Many of the cases treated by Dr. Sacks had been previously diagnosed with catatonic schizophrenia. There are other pathologies that are responsible for a catatonic syndrome, such as EL, where three consecutive stages appear: a drowsiness-ophthalmoplegic form; the development of a subtype of Parkinson's disease, and, finally, the hyperkinetic form[7].

In the film, no attempts are made to address the aetiology of this strange illness. Quite the opposite, in fact: only the data on diagnoses of atypical schizophrenia and hysteria in the case reports are given.

In contrast, diagnosis is an important part of the investigation when Dr. Sayer discovers as a common link that all patients had previously contracted EL. Accordingly, the doctor develops a great interest in gaining further insight into the illness and uncovering it in his patients for a correct diagnosis.

Signs and symptoms. Parkinson's disease is a degenerative disturbance that affects the central nervous system through some unknown mechanism (primary or idiopathic Parkinson's disease). There are some cases in which the cause is known, or at least suspected, or in which the symptoms are the result of another kind of pathology. In this case, the term secondary Parkinson's disease is used. However, all types of Parkinson's disease occur when the neurones of the black substance -which produce dopamine- die or are damaged. The loss of dopamine, the neurotransmitter responsible transmitting signals between the black substance and the striate body to produce for smooth and decided movements, leads to abnormal patterns of nerve activation within the brain, which in turn lead to motor disturbances.

Exposure to an infective agent, such as that responsible for the EL pandemic, has for years been recognised as a cause of Parkinson's disease and was even considered as the primary cause of the illness. Around 40% of the people suffering from EL died during the acute phase of the disease: in 50% of the survivors, Parkinson's disease appeared within 5 years and in 80% after 10 years[8].

The diagnostic criteria for EL include fever, subacute hypersomnolence and ophthalmoparesis, followed by the typical symptoms of Parkinson's disease: akinesia, rigidity, tremors and postural disturbances, and other neurological abnormalities and motion disturbances used in the differential diagnosis between post-encephalitis and idiopathic Parkinson's

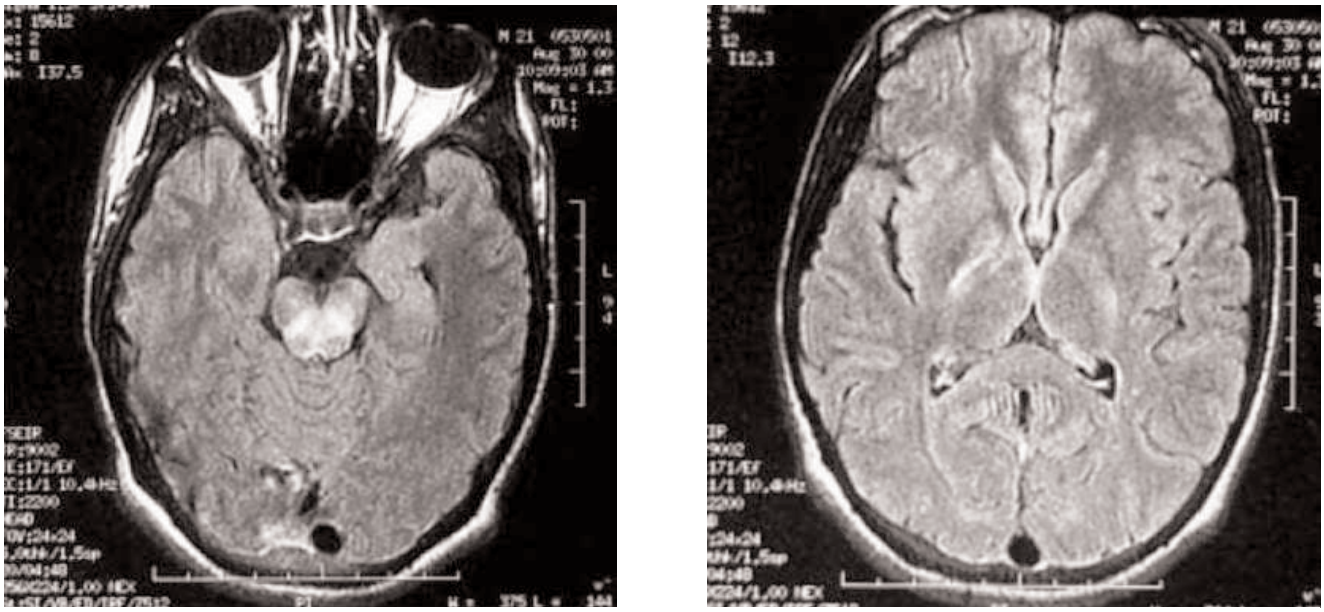

Figure 7: Hyperintense bilateral lesions of the black matter (left). Hyperintense lesions of the right part of the striate body (right) (taken from 10)

disease. These accompanying signs include oculogyric crises, eyelid spasms, palylalia, trembling jaw, open-mouthed postures, facial and tongue tremors, hyperkinesia –dystonia, akathisia, chorea, tics and central respiratory abnormalities, hyperhydrosis, sialorrhea, seborrhoea, orthostatic hypotension sphincter disturbances, sexual disturbances, joint pain, depression and other psychic disturbances, cognitive decline, tiredness and alterations in gait. The slow onset disease was characterised by a considerable degree of neuronal depletion in the black substance and the presence of neurofibrillary plaques in the remaining neurones, mesencephalic and periventricular inflammation being characteristic of its acute phase. Currently, NMR images are useful for the differential diagnosis of EL[9] (figure 7).

Akinesia or bradykinesia is a highly debilitating slowing down of the individual's movements. It often affects certain complex movements such as writing (dysgraphy; micrography is common) oral expression (akinetic dysarthria), normal balance of the arms when walking, and also involves reduced facial expression (hypomimia, the typical face of Parkinson's disease: lack of expression with decreased eyelid movement) (figure 8).

Normally, tremors occur when patients are in the resting state; i.e. they appear in the absence of intentional movements or the tonic efforts required to maintain some kind of posture. They tend to affect the hands, arms, legs, jaw or head. As with other tremors, they get worse with tiredness, anxiety and CNS-stimulating drugs (figure 9)

The rigidity consists of a permanent contraction of the muscle masses, reflected in increasing difficulty in passive mobilization of the joints and trunk (figure 10). The resistance observed during the joint mobilization may be continuous, along the whole of the displacement and of the muscular distension (plastic, waxy or lead-pipe rigidity) or discontinuous due to opposition by the muscles to the distension, as though there were joint gears (the toothed-wheel phenomenon or sign, which is not shown in the film).

The postural disturbances tend to manifest in the advanced stages of the illness. The usual posture of the patients tends towards flexion of the trunk, head and all four limbs. The postural correction reflexes are slowed down, leading to instability. This is seen, for example, when the patient is pushed, since the muscle responses tend not to oppose the fall. Gait is also altered, *Shuffling gait*, with a tendency to take short accelerating steps when walking (*festination*) and a decreased balancing by the arms. The oculogyric crises, differential signs of EL, consist of a tonic deviation in the position of the head and eyes that occurs sporadically and may last from minutes to hours. Patients usually fix their gaze superolaterally and this is accompanied by other movements such as torticollis, and sometimes movements of the trunk and limbs appear (figure 11).

Some medical terms that define abnormal movements (akathisia, opisthotonos, dyskinesia, oculogyric crises. hyponimia…) are not specified in the film, probably in order to avoid too technical a script,

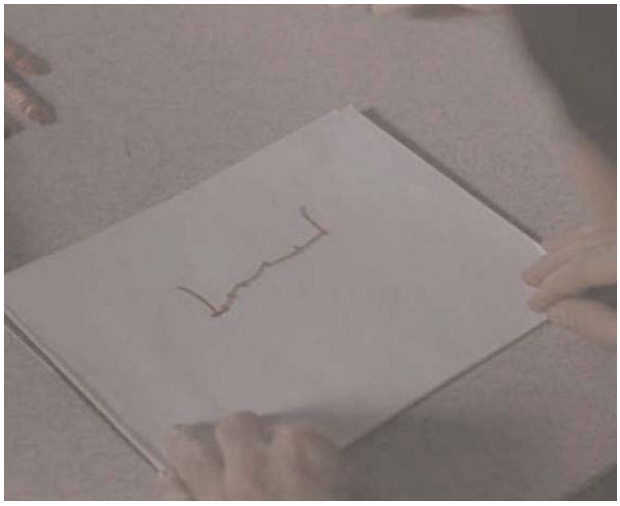


Figure 8: Leonard's micrography (left) and Frances' Parkinsonian face (right)

such that in general more vernacular terms are used to refer to these affectations ("tics")

Treatment. The basis of the treatment of Parkinson's disease is the drug Levodopa (or L-dopa, whose full name is L-3,4-dihydroxyphenylalanine). It is a precursor of dopamine that is absorbed in the GI tract and crosses the blood-brain barrier. When administered orally, it is metabolised at peripheral level by the enzymes dopa-decarboxylase and catechol-O-aminotransferase (COMT). The metabolites generated are responsible for the systemic side effects. Accordingly, current formulations of Levodopa incorporate an inhibitor of dopa-decarboxylase (carbidopa or bensarizide), which does not cross the blood-brain barrier and acts on extracerebral Levodopa, allowing such side effects to be minimised and the daily requirements to be decreased. Nerve cells seem to use Levodopa to manufacture dopamine and replenish decreasing brain supplies of dopamine.

Figure 9: Leonard's hand shakes when, as a child, he is closing the window.

L-dopa is the most effective drug for the treatment of Parkinson's and at some time along the course of their disease all patients must take it. It improves the rigidity, the bradykinesia, the shuffling gait, the hyponimia and the micrography, and to a lesser extent the tremors, but only in the early stages of the illness. Symptoms such as postural instability, dysarthria, anatomical dysfunction, and adverse neurosensory problems do not show such a good response[8].

Response to treatment is rapid, such that if with doses of 1000 mg/day the patients do not improve it is necessary to reconsider the diagnosis of idiopathic Parkinson's, and suspect secondary Parkinson's, as seen in the film (figure 12).

In the film, the pharmacological terminology, the appropriate use of L-dopa, the doses given and the possible interactions and side effects are all addressed appropriately

Side effects of L-dopa. The most common initial side effects of L-dopa are nausea, vomiting, low arterial pressure and anxiety. At five years of treatment, 59% of patients show motor fluctuations and 41% display dyskinesia. During the evolution of the disease, it is common to observe the appearance of a lack of autonomy and neuropsychiatric disorders, which can be attributed to the pharmacological treatment.

The manifestations of dyskinesia include involuntary movements, such as tics, twisting movements and contortions, develop together in patients taking large doses of L-dopa over long periods of

Figure 10: Lucy's hands are rigid

time. A common practice is to reduce the dose of L-dopa to reduce the movements elicited by the drug; however, the symptoms of the illness reappear even with lower doses. Physicians and patients must work in close collaboration to find a tolerable balance between the benefits of the drug and its side effects.

Another worrying problem that may appear during prolonged use of L-dopa is the so called *on-off effect*, which consists of sudden unpredictable changes in movement, from normal to Parkinsonian, followed by a return to normal. These effects probably indicate that the response of the patient to the drug is changing or that the illness is progressing. These side effects due to the high doses of L-dopa administered are very prominent in the latter parts of the film (figure 13).

Additionally, in Parkinson's disease it is possible to use a broad variety of support and complementary treatments, such as standard physiotherapeutic, occupational and speech therapy techniques, which may alleviate problems such as gait disturbances and speech, tremors and rigidity, and cognitive deterioration. A healthy, normal diet may promote the general wellbeing of the patients and exercise may help them to improve their mobility, flexibility and body strength. Patients with Parkinson's disease who are proactive and assume a positive role should be able to maintain their health and may even continue working part-or full-time, although they have to adjust their schedule and working environment.

According to studies performed on the side effects of L-dopa, at least part of the neurological damage seen in EL seems to be caused not by the drug itself but by the oxidative metabolites of L-dopa.

Figure 11: Postural instability (upper image), Parkinsonian gait (centre) and oculogyric crisis (below)

The combination of this drug with high doses of antioxidants would allow the period of efficacy of the treatment to be expanded[11].

Physician-patient relationship. This is an interpersonal relationship in which an important role is played by mutual familiarity and respect. In the film,

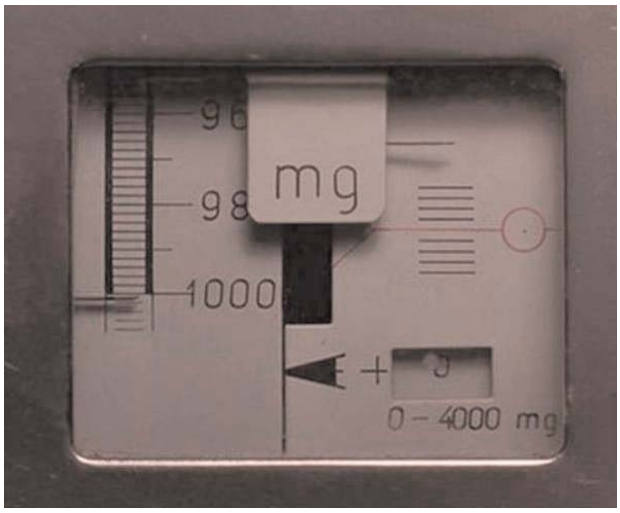

Figure 12: The patients receive up to 1,000 mg of L-dopa daily

it is seen in the interest of the physician in knowing the patients' clinical background when he goes to Mrs Lowe's house to gather information about Leonard's medical history since -owing to Leonard's condition- this is not possible, as is the case of the other patients. This evidently hinders doctor-patient relationships. The stance of the physician seeking to cure the patient, and the personal satisfaction derived from achieving this, is altered when Dr. Sayer becomes obsessed with the idea that the experimental treatment has to be successful and he increases the dose without taking into account the side effects.

When Leonard begins to improve, Sayer changes his attitude and considers more the person who is awakening than the professional prestige this might bring him, and he makes real attempt to get Leonard re-integrated into society. However, the position of the patient when confronted with the changes the physician has wrought in him leads to a situation of "dependence" (confused with friendship) and this creates pressures in the doctor owing to the confidence placed in the his decisions (figure 14). The fact of communicating to Leonard that he is getting worse, and to the others that their situation is uncertain, hints at the transcendental importance of physicians telling patients about their clinical situation, even when they are very ill, in the least traumatic way possible. At the end of the film, we see that Dr. Sayer is very affected by Leonard's relapse, since the ties between the two have been strong. Nevertheless, he tries not to let this become a problem and does follow the correct behaviour in the sense of admitting his failures and making the patient understand the limits of medical possibilities and responsibility. This does not prevent the search for other treatments and possible strategies aimed at making the illness more bearable, and an example of this is when, at the end of the film, we learn that alternative treatments were actually tested later.

Medical ethics. The Janus-like nature – in this case good and evil- of human actions in matters of medicine are directly related to health problems that may lead to dilemmas in the conscience of those confronting them. The autonomy of patients (or if not, family members or legal guardians) to decide about issues concerning the innocuous and beneficial aspects of medical interventions and the justice involved in being able to access medical resources are the basic pillars of the Hippocratic oath.

In this film, the lack of a patient-family relationship is exacerbated by the vegetative state of the inmates, such that autonomy is personified in

Figure 13: Adverse reactions of L-dopa: tics and torsions (left) and the "on-off" effect upon writing (right)

Figure 14: Leonard and Dr. Sayer, posing for a video

Leonard's mother, who freely decides – after being informed of all the experimental aspects and possible unknown effects of a unique treatment (L-dopa, which can be given to her son)- to sign the consent form that is essential for treatment to be implemented (figure 15). [It must be admitted that there is a slip (by way of coercion) on the part of Dr. Sayer when he instigates the treatment appealing to the wishes of the mother to cure her son].

Figure 15: Mrs Lowe signs the informed consent document

Dr. Sayer seeks to improve his patients (*beneficial*), although he does not consider the possible side effects on applying L-dopa in large amounts, and he is indeed premature in applying the experimental treatment to his other patients when period of observation of Leonard's reactions has been reduced. Evidently, Dr. Sayer was seeking improvement for all those with the pathology (*justice*) and did not want them to have to wait a single day more. Perhaps the fact that the patients had been in their lethargic state for years was the main reason for his not waiting, since confronted with a state of catatonia any reaction, however slight, would be welcome.

Critique and opinion

In his *Essays*, Montaigne says [paraphrasing] *Plato was right in saying that to be a true physician it would be necessary to have gone through all illnesses that must be cured, through all the circumstances and accidents that a physician must confront*[12]. Accordingly, before the making of this film the actors who were to portray the patients studied the films of Dr. Sacks' post-encephalitis patients, and Robert de Niro and Robin Williams spent some time with Dr. Sacks at the hospital, observing both him and his patients. Oliver Sacks himself commented that the film was a good image, or the portrayal, of the emotional situation of his patients. This assures us that we are no seeing an adaptation of a story but a faithful reflection of reality. Awakenings is a great film, with many details that may well be overlooked: comments, music, gestures… . Issues that elicit a new revelation each time the film is analysed: An excellent film indeed.

From the page to the screen

Oliver Sacks (b. London, 1933) gained a degree in medicine at Queen's Collage (Oxford) and a Doctorate in Neurology at the University of California. He has been living in the US since 1960, where he is currently Professor of Clinical Neurology at the Albert Einstein College of Medicine and Assistant Professor of Neurology at the University School of Medicine in New York. In 2002, he was awarded the Lewis Thomas Prize of the Rockefeller University. The film *Awakenings*, based on the homonymous story written in 1973[13], portrays the lives of real patients institutionalised in a New York hospital, that the authors fictitiously calls "Mount Carmel" (the real name was the Beth Abraham hospital). Within its walls are people who are *unrecoverable* for the medical science of the times, and it is there that we see that Dr. Sayer's character is very similar to that of Dr. Sacks. For the author, recounting clinical histories is a chance to reflect the struggle of the patients to conserve their identities in a world changed by their disturbances. It should be noted that according to Dr. Sacks, such a rapid recovery of the physical and psychic agility can only be explained in terms of the notion that in the minds of those patients there was no passage of time, such that their skills and

memories were intact. Unfortunately, as portrayed in the film, the return to life for many patients involved the trauma of confronting a world very different from the one they had departed earlier, before they became ill, together with the appearance of new neurological problems that returned them to their catatonic state. This is where the difference lies between history and the film. In the film, the end is not real because some of the patients originally described by Sacks, far from remaining at a point similar to the beginning, were able overcome the situation and adapt themselves, perhaps with outside aid, and vanquish the limitations that medicine had been unable to solve. Thus, for example, in the book Miriam managed, by force of will, to maintain an active life and accept reality, and Frances survived the pressures and refused to allow them to dominate her, thereby validating her strong personality. The book is proof that the daily lives of these patients improved considerably for those who decided to grasp the reins of their new reality.

Conclusions

Both the book and the film finally converge in a common idea: when pharmacological treatment fails other methods, both social and on a personal basis, can and indeed should be brought into play to achieve other *awakenings*.

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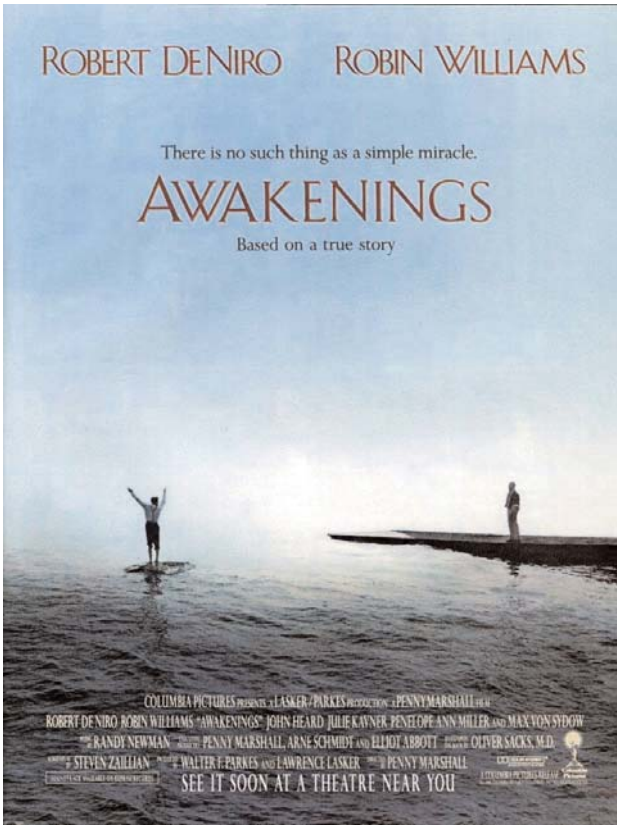

USA poster with some of the characters