Chemicals that could be used scientifically to force an individual to tell the truth—dubbed *truth sera*—were first described in the early 1920s. Ever since, the notion of “truth drugs” has remained tenaciously within popular culture. One of the most important reasons for the survival of the notion of a pharmaceutical technology of authenticity was the role of the barbiturates sodium amytal and sodium pentothal in psychiatric research and treatment during the 1930s through the 1950s. This article traces that history, giving special emphasis to the role of motion pictures. The article argues that researchers were seeking to develop a technology of authenticity (rather than of the truth per se). It examines how they used motion pictures to help them develop and disseminate this technology.

One of the puzzles in the history of film is the suppression of John Huston’s (1946) documentary about psychiatric casualties of war, “Let There Be Light.” The Army commissioned this film, charging Huston with removing the stigma it feared would make it harder for psychoneurosis patients to become integrated into civilian society. The resulting documentary was, according to Huston himself, the most moving and joy-filled experience he ever had as a filmmaker. He threw himself into the world of returning casualties and produced one of the most human, empathic portrayals during this period of “ordinary men placed in extraordinary circumstances” (Agee, 1946, cited in L. Brill, 1997). However, just moments before the first public screening, the film was confiscated. It was then suppressed by the Army for 34 years before it was eventually released in 1980 by an order from then-Vice President Walter Mondale. What was so threatening—so fearfully powerful—about this film? One explanation offered both by reviewers and by Huston was the Army’s concern to maintain a “warrior” myth. According to this myth, “our American soldiers went to war and came back all the stronger for the experience” (L. Brill, 1997, p. 112). “Let There Be Light” hardly supported this notion. It showed real soldiers in impaired mental states, and it recorded their experiences of altered states of mind (using hypnosis and sodium pentothal).
the most general sense, it depicted soldiers in a state of psychic vulnerability and mental flux. But there was also a more specific reason why these scenes troubled the military. One reason why the film’s central scenes were so potent stemmed from the contemporary significance of hypnosis and hypnotic drugs in the transformation of memory and identity.

The history of these practices, and the ways in which film figured in their status among various communities, is the subject of this article. I examine a body of psychiatric practices of the 1920s through the 1950s, in which psychoactive drugs were put to work in the reconstruction of patients’ memories, identities, and even, in the end, selves. When these drugs—barbiturates such as sodium amytal and sodium pentothal—were first developed in the 1920s, they were initially put to use as surgical anesthetics, but they soon drew interest from psychiatrists and neurologists seeking new techniques for treating various nervous disorders. Some practitioners thought of the trances they seemed to create as chemically induced states of rest—the forerunners, evidently, of sleep and insulin therapies. Others, however, regarded them as having great untapped potential for psychic transformation. They could be used to produce an altered state of mind, in which some lost or tainted part of the individual (memory, identity, or “normality”) could be recovered.

These practices first arose in Wisconsin, in neurologist W. J. Bleckwenn’s and neuropyschiatrist J. F. Lorenz’s attempts to restore catatonic patients to their normal selves. During World War II their efforts were broadened by American and British psychiatrists, in particular Roy Grinker, John Spiegel, William Sargant, and Eliot Slater. These men sought to restore the memories and identities of wounded soldiers in their care—to help their patients become their old selves again. Their projects shared a common ambition to develop techniques for recovering psychic authenticity within their subjects, and for all of them the psychoactive barbiturates seemed to offer a direct route to such authenticity.

In this article I focus on the role played in these practices by representations in the then-new medium of film. The techniques of filmmakers, I argue, were adopted and adapted in bids to solve major evidential problems facing the sciences of mind. From Bleckwenn and Lorenz onward, a major part of all these projects was the documentation of their experiments and therapies by motion pictures. The medium of film consequently played an important part in the production of what was to be regarded as authentic in these psychiatric and neurological endeavors. Typically, researchers first filmed their subjects in their presenting, disabled state and then provided close-up shots of the patients as their pharmaceutical treatments took effect. Sometimes they added voice-over interpretations, sound effects, or even staged scenes representing patients’ thoughts and flashbacks under the influence of the drugs. Viewing their films in chronological sequence, one can reconstruct a history of the crafting of an objectivity effect in this most problematic of evidential fields.

In this article I therefore argue that these films need to be viewed in a broader historical perspective that embraces the epistemic and practical problems associated with the administration of psychoactive drugs and hypnotic techniques—and that practitioners’ willingness to live with those problems, if not finally to solve
them, rested importantly on techniques of representation on film.¹ My goal is accordingly not a study of the practices of film narrowly construed. The lack of certain kinds of information about these particular films in any case places a limit on the extent to which such an account could be made.² Rather, the purpose is to produce a contextual analysis of conventions of representation, in which film functioned as a significant resource alongside printed, manuscript, and oral narratives. This history is intended to provide a context for the films, and the analysis of the films themselves reveals how they and their medium affected the medical management of memory and identity.

The films described in this article were never released commercially. Their original audiences were, in all likelihood, fairly small; but they were also select—they comprised scientific peers, future practitioners, administrators, and experts. Such films thereby had an influence beyond what quantitative measures of audiences would imply. They substantially contributed to an evolving body of conventions of representation for altered states of mind and the psychophysiology of selfhood. In conjunction with pharmaceutical therapies, film helped shape interpretations of the self as if was constituted and recalled by acts of remembering. As a result, the history of the medium is immanent in some of modernity’s most elemental concepts of self and memory.

The Sciences of Altered States

The use of altered states of mind as an arena in which hidden truths of the psyche could be revealed had a long history by the early 20th century. Mesmerism, hypnotism, and psychical research made altered states into some of the most widespread experimental phenomena of the 19th century. These would-be sciences were highly controversial, however, and for many reasons. Perhaps the most problematic was the difficulty of documenting, validating, and interpreting evidence about altered states of mind.

Victorians wishing to study mental phenomena faced the challenge that they wished to study the experience of altered states but ultimately could do so only through the medium of subjects’ own testimony. In its crudest form, the problem this presented could be articulated as the question of whether a subject were deliberately faking some effect, but this was just an extreme on a wide continuum of evidential difficulties. Another way of putting it is that if the experiment worked, its results had to be evidentially problematic. Subjects would not share the psychological frame of reference of the experimenters, and observers were therefore at a heightened disadvantage in trying to interpret what those subjects said. Of course, this was a problem in any experiment involving human subjects, particularly because subjects were usually of a different social class from experimenters, but this problem was much harder to ignore or to finesse in experiments involving altered mental states, because such states could not easily be subsumed into instrumental regimes of objectivity (unlike, e.g., the physical properties

¹ I use the term hypnotic and its cognates, in accord with the usage of the 1930s, to include pharmaceutically generated trances.
² There are few records relating to the production or reception of several of these films, as far as I have been able to learn at present, and I have been able to find only minimal information (separate from what is implicit in the content of the films) about their audiences.
measured by Victorian anthropologists). Observers at the scene could not wholly erase such problems, but they did try to mitigate them by using laboratory medical techniques such as monitoring heartbeat, temperature, and other phenomena. These could indeed be located in an instrument and were assumed not to be subject to volitional or interpretative influences. Still, they were but proxies for the real subject of inquiry, and insecure ones at best.

In practice, however, witnesses who attended psychic experiments regularly said that the visceral power of the phenomena washed away their skepticism. They often wrote that they would never have believed in the reality of an effect—or, sometimes, even understood claims made about a phenomenon’s character—had they not witnessed the phenomenon directly (see Preface, Sandby, 1844). This kind of claim was intended to persuade readers to accredit a mesmeric experiment, but, emphatic as it was, it could not take the place of direct witnessing. Although elaborate conventions had been in place since the 17th century to make it reasonable to believe in the reality of specific phenomena one had not oneself seen, Victorian experimenters complained that these did not work well in attempts to “virtually” witness altered states of mind. A major reason for this was that the conventions of late 19th- and early 20th-century scientific writing increasingly marginalized the experiential/subjective voice of the experimenter, replacing a previous idiom that included the investigator as the first person. Attempts overtly to lay claim to plausibility for testimony about personal experience of a phenomenon were therefore becoming increasingly constrained, and they came under particular attack when they constituted the main form of evidence of the phenomenon—as was the case, for instance, with spiritualism. This change in evidentiary conventions, which was brokered by the rise of laboratory science in the second half of the 19th century, was a significant factor in the marginalization of mesmerism. Some Victorian psychological researchers objected, complaining that the emphasis on instruments tended to exclude from the domain of scientific study whole bodies of phenomena that could not be so studied—subjective phenomena such as introspection, for instance, and anything requiring personal testimony (Chambers, 1859). Mid- and late-Victorian scientists either celebrated or lamented the exclusion of such evidence from the realm of what was proper to scientific study, but none doubted its reality or significance.

So the 20th century opened with a paradox, or least a problem. To be scientific, investigators of internal states as varied as Freud and the experimental psychologists were focusing on mental phenomena, but the very canons of science to which such investigators aspired made it more contentious (than in some other areas of inquiry) to claim that one was saying anything scientific about them. This problem was not solved or rendered obsolete in the 20th century. On the contrary, as the field of application for psychology broadened, so the problem became more acute. For instance, a central issue for early experimental psychology was the degree of reliability of the memories of eyewitnesses, coupled with the degree of variation among different witnesses. Research into witnessing produced a picture of human observation and testimony as inherently capricious.\(^4\) So, as forensic science was developed in the 1900s through the 1920s, one of the key motivations

\(^3\) For more information on “virtual witnessing,” see Shapin and Schaffer (1985).

\(^4\) See, for example, Münsterberg’s (1908) discussion of witness reliability.
of researchers was a perceived need to find a way of reconstructing human actions without having to rely on the trustworthiness of such testimony. One measure of the seriousness of this need was that hypnotic states finally found their way into the psychological laboratory (see Gauld, 1992, and Lawrence & Perry, 1988, chap. 12). There their phenomena were tested, apparently for the first time, within the framework of formal experimental science.

Film and the Replication of Mental States

One of the characteristics of motion pictures as a mass medium was that it depended on portraying, exciting, and otherwise exploiting emotional and psychological states. Films soon became part of the repertoire of visual conventions for scientific representation. By the early 20th century, this repertoire was rich and extensive. Visual techniques had a solid pedigree in sciences of mind in particular, and especially in studies of altered mental states, following a rapid rise in interest in using such techniques during the second half of the previous century. Examples included the uses of photography in spiritualism and psychical research and of sketches and photographs in the iconography of fin-de-siècle hysteria (Goldstein, 1987; Pick, 1989; for more on Charcot’s iconography of hysteria, see Dror, 1999, and Tucker, 1997). With the advent of technologies of the moving image came the use of chronophotography in physiological film and the use of moving images more generally in neurological, ethnographic, and physiognomical studies (Sturken & Cartwright, 2001).

The earliest research films sought to use motion pictures to capture and communicate aspects of human movement that were notoriously difficult to describe in words. Some of the very earliest uses of film, for instance, were in surgical pedagogy, to give students an impression of visual proximity to the inside of the body and to the movements of the scalpel that was impossible in the surgical theatre. One way in which the recording of human movement became important to the study of nervous phenomena in particular has been discussed by a number of historians, including Joel Snyder, Bob Brain, and Lisa Cartwright. Cartwright (1995), for instance, showed how recorded movements of patients could make it possible for neurologists to make differential diagnoses that relied on miniscule distinctions in such movements—distinctions that were extremely hard to make with the naked eye but that could be discerned on film when the movements were slowed down. Indeed, in this respect film had some of the characteristics of the technologies associated with the “graphic method” in the late 19th century: It, too, produced a visual record correlated with specific kinds of otherwise-imperceptible human motion. However, in contrast to the line of ink that was intended (in part) to be a substitute for narrative evidence and the hermeneutic challenge of interpreting the subtleties of human self-expression, film worked by embracing these very complexities.

Film therefore offered to researchers a way of making subtle, intensive, and repeated studies of the human body in motion. By manipulating the speed of the film, examining the body frozen in movement second by second, researchers could produce almost a serial physiognomy of the body. This led naturally to the obvious issue of witnessing: If one accepted the legitimacy of a filmed experiment—or if, as in the case of Cartwright’s neurologists, the film were the only site
at which the phenomena could be viewed at all—then the same phenomena could be witnessed in principle by an indefinite number of people. It addressed head-on this aspect of the perennial problem of psychological evidence.

The other resource that film offered to the sciences of mind was an overt response to the challenge of gaining access to the consciousness of another human being. That this was recognized at the time may be inferred from the earliest sustained reflection on how audiences respond to film. This discussion came from one of the most prominent early 20th-century figures in the history of forensic psychology: Hugo Münsterberg, a German physiologist and psychologist in the Harvard philosophy department. Münsterberg wrote his famous essay, *The Photoplay: A Psychological Study*, in 1916. It was widely influential in his day and has since become a classic in the history of film studies.

Münsterberg’s reflections on what films do that print and theater do not are intriguing in any light, but especially so in that of the question of how the medium of film might affect the study of unconscious thought. Münsterberg (1916) argued that a film’s content is an externalization (into the film’s structure and content) of the internal workings of the mind; that is, imagining the film as the work of an individual, that individual’s intimate thoughts, memories, and so on, could be shared in a way that felt more direct and powerful because of the way that visual materials could be assembled, delivered in close up, and presented in a particular aspect.

Moreover, according to Münsterberg (1916), the medium also does more. A film takes on some of the processes that ordinarily go on internally within our minds and invites us to let it do them for us. The process of focusing our attention, which is ordinarily internal to each individual, is, he wrote, structured by the way scenes and close-ups are ordered in a film: “*The close-up has objectified in our world of perception our mental act of attention* . . . It is as if that outer world were woven into our mind and shaped not by its own laws but by the acts of our attention” (Münsterberg, 1916). One implication Münsterberg saw in this was the ability of film to deliver (with apparent directness) to the mind of a viewer a message or phenomenon that was ordinarily difficult to convey because of its ineffable or nonverbal character.

Much of Münsterberg’s (1916) essay was therefore devoted to the question of how film conveys emotion to audiences. He thought the ability to orchestrate visual sensations had enormous potential for imparting particular emotional messages. For instance, the ability to use visual metaphor could awaken particular emotional associations in an audience; or, more simply, the power of a close-up could create a feeling of intimacy and shared experience. The latter would be especially powerful when applied to something that ordinarily would be a private act or that could not normally be seen from such proximity, especially by a group.

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5 There are some excellent studies of how films were designed to, and did indeed affect, audiences in the very early period of the film, that is, before the era of filmmaking with which this article is concerned. See, for example, Gunning (1990) and Gunning (2003). For a sense of how the arguments about what film communicates have evolved during the last century, see Bazin (1960), who presents film as a transparent medium giving viewers direct access to nature (i.e., presumably particular aspects of the world that can be viewed even more directly through this medium because of the possibilities for closer and more specific inspection); see also Cavell (1971). Cavell is greatly indebted to the “realism” or “transparency” argument provided by Bazin.
One obvious example would be a kiss—a roomful of viewers can feel they are inches away from the passionate couple. Another example, for the present purposes, would be the detailed play of expression on the face of an individual experiencing some powerful emotion in or after experiencing an altered state of mind. Münsterberg’s (1916) argument was made before the advent of talkies, but the addition of a richer array of sensory resources would clearly only strengthen his case.

Such a technology evidently had enormous implications for the scientific representation of consciousness and states of mind. I do not mean to suggest here that Münsterberg’s (1916) specific words directly influenced the use of moving images in sciences of mind but rather that they give an indication of possibilities that were more widely conceivable for the power of film to access and convey intimate phenomena. Support for this contention is provided by the treatment of consciousness and unconsciousness in discussions of the new genre of surrealism in the 1920s and 1930s. Jean Goudal, for example, declared in 1925 that the surreal method involved “uniting the conscious and the unconscious on the same plane”—and added that this was possible through cinema because the “thing seen [on film] corresponds exactly to a conscious hallucination” (Goudal, 2000, p. 86). Decades later, André Breton too would look back to this time as a period when films took over his own mental functions: He had never “known anything more magnetizing” than cinema, Breton averred, and had left movie theatres feeling “charged” with the messages imparted by the films he saw. “As there had been nothing deliberate about our actions,” he concluded, “qualitative judgments were forbidden” (quoted in Goudal, 2000).

The problems that had so deeply frustrated Victorian researchers—problems encapsulated by the question of how an individual could secure the plausibility of evidence of his or her self—could perhaps now be ameliorated by a technology that helped us know the mind of another by guiding our acts of perception to mimic those of that other. Of course, the “other” in this instance was not the psychiatric patient but the account or version of that patient formed in the mind of the psychiatrist. Still, the act of interpretation (of the filmmaker) was then structured into a series of acts or states of consciousness that could be transferred to the audience.

It is significant that these predictions of the immediate possibilities of film were voiced in the period just before the first of the films considered in this article—and, moreover, by an individual who was regarded by all the psychological researchers discussed in this article as an authoritative and pioneering figure. As their new generation found, films of many kinds could supply a new kind of visceral experience for the indirect witnessing and adjudication of human phenomena. Münsterberg’s (1916) remarks set the stage for the way in which researchers’ very different projects used the moving image to communicate and explore this concern.

In the following sections I show how Münsterberg’s (1916) argument was cashed out to make film into an instrument of psychological insight. The films I examine are very different from one another in genre: One is a research film, one an Army training film, one is a combination documentary–training film, and the last is a documentary. However, they all center on similar practices dedicated to producing and manipulating altered states of mind, and they all share a concern
with the transformation and adjudication of personal identity. More than that, each is devoted to the reconstructing of some authentic part of this identity through the use of trance states. In effect, the history of medical practice, scientific knowledge, and personal rehabilitations (and destructions) traced here amounts to a series of attempts to create a craft for the representation of interior mental states.

Forensic and Catatonic Recoveries: From Truth to Authenticity

Techniques that used altered states of mind as forums for the recovery of identity drew on a number of major developments of the first half of the 20th century: the pharmaceutical revolution; the rise of the psychoanalytic movement; and, ultimately, the exigencies of the second world war. In immediate terms, though, such techniques emerged out of a debate about so-called “truth serum” during the 1920s.

Truth serum was the invention of a Texas country doctor named Robert House. House claimed that a well-known obstetric anesthetic, scopolamine, had the power to make individuals tell the truth. He supported his claim by articulating an increasingly explicit account of memory as a permanent record of experience. According to this account, the drug suspended the powers of volition without impairing those of communication, thereby allowing unfettered access to authentic memories.

Although snubbed by the courts, House’s notion had enormous appeal to lay audiences and to police and forensic practitioners. Throughout the 1920s, he toured the country carrying out scopolamine interviews on criminal suspects and convicts, drawing national publicity (Goddard, 1932) and inspiring psychiatric and legal societies to debate the potential of his technique (Lorenz, 1932; “Selections,” 1931–1933). When the barbiturates sodium amytal and sodium pentothal were first synthesized (in 1927 and 1929, respectively) and used as surgical anesthetics, they were therefore tested forthwith for their truth-telling potential—that is, for their ability to extract reliable memories from the minds of a subject. They were deemed effective, and amytal and pentothal soon eclipsed scopolamine as truth drugs (Herman, 1938; Lindemann, 1932; Mayer, 1933; Thorner, 1935; Wagner, 1933). At this stage, they attracted the attention of researchers wishing to explore their other effects on psychic processes. As neurologists and psychiatrists started to study the psychic possibilities of these drugs, they were continually aware of the barbiturates’ associations with truth serum and therefore with a kind of physiology of authenticity.

The barbiturates were developed at a time of great interest in both hypnotically produced and spontaneous altered states of mind. Specifically, psychiatrists and neurologists were fascinated by the phenomenon of *catatonia*, in which afflicted individuals remained in an apparently unresponsive state for months or even years, to the extent that they had to be spoon- or even tube-fed. Interest in such *spontaneous hypnotic states* was not new in itself, of course; some of the most famous experiments in the history of hypnosis were Charcot’s studies (e.g., Charcot, 1892–1893). However, the relationship between such states—and any

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6 Sodium amytal is a barbiturate compound first synthesized by the Lilly Company around 1927 (Naples & Hackett, 1978).
psychologically pathological state—and the potential therapeutic effect of chemical agents was becoming a major point of discussion within many fields of the sciences of mind. Even Freud, in several articles of the 1920s and 1930s, noted the possible need for chemical techniques to supplement words in the psychoanalytic consulting room (Freud, 1922, p. 90; 1933a, p. 211; 1933b, p. 402). In the 1920s, the advent of the barbiturates supplied neurologists and psychiatrists with a new set of tools, and the laboratory studies of hypnosis extended the legitimacy of hypnotic states beyond psychoanalytically oriented researchers to attract the interest of neurologists as well (for more on hypnotism see, e.g., Bramwell, 1903; Hollander, 1928; and Shilder & Kauders, 1927).

Among the many studies of the psychoactive effects of sodium amytal and pentothal, one was particularly inspiring to future psychiatric practice. This was a series of experiments made at the University of Wisconsin—Madison on the effect of deep, drug-induced trances on catatonic patients. In the 1920s and 1930s, Madison was a leading center in the study of altered states of mind. The first laboratory studies of hypnotism were carried out there in the late 1920s. Experiments relating to the relationship between psychoactive drugs and suggestibility and of the psychophysiology of various drugs were also carried out there at this time (Baernstein, 1929). Above all, the Wisconsin Psychiatric Institute (WPI), a mental hospital and psychiatric research facility founded in the 1910s, became part of the university during the early 1920s, as a mark of the university’s commitment to psychiatric and neurological research. W. J. Bleckwenn became part of the boom in these areas of research, when he was hired by the director of the WPI, the psychiatrist W. F. Lorenz, to become the WPI’s assistant director and chief neurologist.

Bleckwenn and Lorenz made an interesting team. Bleckwenn (see Figure 1) was a neurologist with little training or interest in psychological dynamics separate from physiological phenomena. Lorenz (see Figure 2) was a clinical psychiatrist with interests in psychoanalysis and forensic psychology; one of his students had drawn an affectionate caricature stating that no mind’s secrets were safe from him (see Figure 3). Throughout the 1920s, they and others at the WPI experimented extensively on the effects of psychoactive drugs on patients in “acute mental excitement and agitated depressions” (Bleckwenn, 1930c). Initially, they were looking for an ideal sedative—one that would deliver rest without a depressive effect after the patient awoke—and when they studied amytal, beginning in the mid-1920s, they found that it could achieve this ideal form of rest. However, it also delivered much more. In the late 1920s, Bleckwenn and Lorenz began to use amytal to produce states of profound unconsciousness in patients who had been catatonic for long periods—months, and even years. They found that this allowed them temporarily to revive activity, communicativeness, and some element of the former normal selves of their patients.

Lorenz and Bleckwenn claimed that amytal had a variety of effects on the mind, but all of them fell under the general category of relaxation. Such relaxation could have a beneficial effect on a great variety of problems, ranging from psychoses and schizophrenia to neurosis. Bleckwenn claimed, for example, that amytal provided a psychically cleaner form of drug-induced rest than other drugs—with no depressive aftereffects—and that extended periods of rest over several weeks transformed his neurotic patients. However, amytal was not simply
a way of producing gradual progressive changes by means of rest states. Patients diagnosed with catatonic schizophrenia actually recovered their normal selves during part of an amytal treatment, although they lapsed back into unresponsive catatonia after the effects of the drugs wore off. In one case, Bleckwenn (1930a) described a patient (a 20-year-old university student) who had suddenly become confused and stopped speaking and eating. He then “[developed] active hallucinations, made bizarre gesticulations and facial grimaces, and became noisy, singing and yelling day and night” (p. 1169). When sedated with sodium amytal, however, his behavior not only calmed but became transformed: “He seemed quite normal for about four hours,” reflected self-consciously on his period of insanity, and said that he hoped to “recover so as to enter school at the beginning of the next semester” (Bleckwenn, 1930a, p. 1169). However, he lapsed back into the catatonic state when the drug left his system. Bleckwenn (1930a) gave him

Figure 1. Dr. W. J. Bleckwenn, professor of neuropsychiatry and assistant director of the Wisconsin Psychiatric Institute, circa 1935. Photograph by Harold N. Hone. Courtesy University of Wisconsin Archives.
daily injections with similar results—“except that his periods of being normal increased as the excitement gradually subsided” (p. 1169). He continued to improve after being transferred to a sanatorium, where he decided to pursue an “outdoor life and not to return to school.” He was now contentedly employed with a florist (Bleckwenn, 1930a). This case was different from most of Bleckwenn’s catatonic patients because the patient was active; the majority were “stuporous, cataleptic and negativistic”—classic cases of catatonic schizophrenia, as described in accounts such as Kraepelin’s (1906) of “negativistic” catatonia in dementia praecox (Bleckwenn, 1930b; Lorenz, 1930).

Bleckwenn and Lorenz energetically promoted their new practice, publicizing the intriguing effect it produced. Their work intensified research into the variety of possible applications for sodium amytal narcosis within psychiatry (Ettleson, 1932; Murray & Burns, 1932; Solomon, 1931). Their articles also intensified ongoing research into the psychological effects of the barbiturates—perhaps one reason for their impact is that Lorenz was a psychotherapist with psychoanalytic sympathies, and Bleckwenn was a neurologist with no psychodynamic orientation, so that where Lorenz tended to see the drugs as acting to lift inhibitions or counteract repression, Bleckwenn described them as producing rest or as blocking some immediate physiological derangement of brain function. At any rate, research inspired by their articles ranged widely, from deep-sleep therapies in which amytal was supposed to subdue mental activity or disrupt unhealthy “conscious

Figure 2. Dr. W. F. Lorenz (1930s), professor of psychiatry and director of the Wisconsin Psychiatric Institute. Courtesy University of Wisconsin Archives.
processes to psychoanalytically oriented projects in which the drug enabled mental activity by disabling inhibitions or repressive brain functions that otherwise impeded the desired thought or communicative processes. In some cases, however, the goal—or at least the achievement—of such studies was distinctly more modest than Bleckwenn and Lorenz claimed. Erich Lindemann of the Iowa Psychiatric Institute, for example, confirmed that schizophrenic patients treated with amytal were able to describe their hallucinations, giving the psychiatrist a useful understanding of the kind of delusions by which they lived, but he conceded that he had not found the drug to restore his patients to a normal state

7 This is a discussion statement by Dr. Harry Stack Sullivan of Towson, MD, that is appended to Bleckwenn (1930a).
(Lindemann, 1932). Still, by the mid-1930s, Bleckwenn and Lorenz’s work was required reading for anyone working on the neuropsychiatric application of psychoactive drugs. In 1936, Bleckwenn made a film, titled “Effects of Sodium Amytal Narcosis on Catatonia,” to demonstrate his approach and its effects. There seems to be no extant archival or published material to explain his reasons for creating this film, although it is evident from its content that it was intended for an audience of specialists. It seems to have been designed to complement Bleckwenn’s lectures, and it showcased the most striking and famous phenomena he had produced since joining the WPI—namely, the production of transient normal functioning in individuals with severe and long-term cases of catatonia. Given the conflicting and diverse responses his work had produced, the film may have been motivated by a desire to insist on the power of amytal not only to sedate but also to transform the psychic functions of his patients. Bleckwenn apparently sought to use this new kind of rhetorical power, different in kind from the idiom of academic articles, to communicate what he meant by the “normal” character of his patients’ behavior under the influence of the trance.

The film is composed of several pairs of scenes, one pair for each patient, linked by intertexts. There is no introduction; this was presumably provided in person during rounds or lectures, and extensively of course by Bleckwenn’s published articles. First, a single intertext explains each patient’s limitations (see Figure 4): whether he (all the patients are men) is tube-fed or spoon-fed, and the length of time he had been catatonic (how many months or years). Then the subject is shown before treatment: He is slumped on a bed or in a chair, unable to walk, and clearly incapable of other actions (see Figures 5 and 6). The film then presents a brief intertext (see Figure 4) announcing the state of the patient after 3 hr of deep narcosis; that is, the viewer is about to see the patient as the drug is beginning to wear off.

The difference is dramatic. The patient is now able to drink; to eat; in some cases, to read and write; and to walk naturally (see Figure 7). He has shed the

![Figure 4](https://via.placeholder.com/150)

*Figure 4.* A pair of intertitles framing the “before” and “after” states of the patient. The first describes the patient’s default condition; the second prepares viewers to see the patient’s state 3 hr after the administration of a large dose of sodium amytal. Still from “Effects of Sodium Amytal Narcosis on Catatonia,” by W. J. Bleckwenn, 1936. In the public domain.
apparent automatism that characterized his earlier state. The improvement is clearly displayed. The viewer is not shown the drug-administration process, or the state of deep narcosis. Presumably it would not have been practical to film the entire administration of treatment, but the omission also has the advantage that the before-and-after pairings deliver a more powerful spectacle of mental transformation. The film also refrains from displaying any longer term behavior. This lack likewise serves a kind of purpose in that the great weakness of Bleckwenn’s technique was that all of his patients lapsed back into catatonia as the drug left their system.

This film offered a powerful supplement to lectures and a way of producing for visitors to the WPI a reliable and instantly stageable experience of Bleckwenn’s therapeutic work. Such an artifact was all the more important because the most striking phenomena of his career could not be produced quickly or to order; neither could they be sustained in the behavior of his patients for more than a few hours. The film offered audiences a way to view the evidence for his claims more reliably and more dramatically than most visits to the wards could possibly do.

Bleckwenn and Lorenz’s project helped propel amytal, and soon its cousin sodium pentothal, into broad acceptance within psychiatric practice. Before long, amytal and pentothal were being used throughout psychiatric hospitals in America and Europe. Within the exploding literature on the psychoactive effects of barbiturates, Bleckwenn and Lorenz became landmark authorities, inspirational for decades.

Figure 5. Bleckwenn leans over a patient (before amytal treatment) to demonstrate the rigidity of his muscles (during this scene, the patient’s limbs are moved into various positions, and they remain where Bleckwenn places them). Still from “Effects of Sodium Amytal Narcosis on Catatonia,” by W. J. Bleckwenn, 1936. In the public domain.
Neurotics and Malingerers: From Authenticity to the Psychiatric Self

The working hypothesis at the core of this developing field of psychopharmacology reflected the rise of psychoanalytically oriented approaches to the mind, particularly that of ego psychology. In the face of emotional pressures too powerful to bear, it was held, the mind blocked communication (including communication with doctors) as part of its defense. Catatonia was sometimes defined as a state of generalized repression. The idea was that these pressures could be temporarily lifted by the drug. In psychoanalytic terms, the affect could be temporarily severed from its associated idea. From here, it was only a short step to a mid-century practice that is more familiar to historians: the practice known in England as narco-analysis and in America as narcosynthesis.

In 1936, British psychiatrist Stephen Horsley proclaimed his development of narco-analysis by announcing that sodium amytal provided a means of carrying out “exploratory surgery” on the mind (Horsley, 1936a). Horsley had been inspired by Lorenz and Bleckwenn and in part by newspaper coverage of forensic experiments on the truth-telling potential of amytal. However, his practice was intended to be different from both of these. During the trance state, he maintained, repressed traumatic memories could be retrieved and examined, and then the application of posthypnotic suggestion could integrate this mental content back into the patient’s mind in a constructive manner. His practice was supposed to be

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8 On the importance of ego psychology within American psychiatry in the 1930s–1950s and a framework that emphasized the relationship of the self to the external environment, see Hale (1985; see also Ross, 1994).

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Figure 6. Close-up shot displaying patient’s fixed stare (Bleckwenn’s hand is supporting his neck). Still from “Effects of Sodium Amytal Narcosis on Catatonia,” by W. J. Bleckwenn, 1936. In the public domain.
the poor man’s psychoanalysis: a means of tapping into the unconscious for the price of an IV. 9

What Horsley sought to recover, as this implies, were not memories in and of themselves. Neither did he dwell on the truth status of those memories he did encounter. His aim was explicitly psychoanalytic. The purpose of narcosis, in his eyes, was to serve as an enabler or catalyst for the greater project of producing a synthesis and re-integration of problematic thoughts and memories into the functioning mind. This was ultimately to be achieved through the “re-arrangement” of psychic elements in psychoanalytic psychotherapy, sometimes using suggestion alongside the traditional psychoanalytic conversation (Horsley, 1936a). Horsley’s treatise on narco-analysis even began with an epigram from Romans xii:2: “Be ye transformed by the renewing of your mind” (Horsley, 1943).

However differently the mind of an individual might be defined in Horsley’s project, it shared with Bleckwenn and Lorenz’s the aim of reconstructing that individual. With the outbreak of war that aim took on military significance. Amytal’s reputation as an efficient tool for accessing repressed thoughts, coupled with its ability to give subjects a feeling of relaxation and safety, made it the perfect drug for treating war trauma. Treatments based on it and similar drugs would become staples for psychiatric casualties, in a war destined to become for chemical psychotherapy what World War I had been for psychoanalysis: the vast

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9 His term, narco-analysis, was amended to narcissynthesis by the American physicians Roy Grinker and John Spiegel in 1942 (see Horsley, 1936a, 1936b; Grinker & Spiegel, 1944, 1945b, 1977).
testing ground that established the technique as a favorite tool for many doctors, who would continue to rely on it long after the fighting was over.

In Britain, large numbers of traumatized men poured into hospitals after the evacuation of Dunkirk, and many of them came to the Sutton Emergency Hospital, where their treatments were supervised by psychiatrists William Sargant and Eliot Slater. At their wartime psychiatric facility, the Belmont Emergency Services Hospital in Sutton Surrey, Sargant and Slater developed a number of new treatments, including insulin coma, electroconvulsive therapy, and frontal leucotomy. It was in this context that Sargant explored the powers of sodium amytal and hypnosis in the treatment of psychiatric casualties of war (Sargant & Slater, 1940).¹⁰

Sargant disavowed Horsley’s psychoanalytic framework for the use of drugs. Indeed, he claimed to eschew psychotherapeutic approaches altogether in the treatment of psychiatric casualties. Instead he emphasized what he called the “physiological components” of “such mental attributes as courage, will-power, and self-control” (Sargant & Slater, 1944, p. 82). Psychological problems were based in an altered physiological state, he insisted, even if they were experienced and displayed as mental and behavioral abnormalities. Once one accepted the “biological and deterministic nature” of the neuroses and psychoses—a stance he explicitly opposed to psychoanalysis—one could envisage a direct role for drugs (rather than words aided by drugs) in their treatment (Sargant & Slater, 1944, p. 82).

Instead of treating amytal as a way of lifting repression, or of enabling “psychic elements” to interact in new ways in the mind, Sargant therefore thought of the drug as working at the level of the autonomic nervous system. Psychoanalysts used a notion of “analgesic” metaphorically to explain how amytal helped a patient. A psychoanalytic article in 1945 thus explained that “just as an analgesic drug makes it possible for a patient to allow his hand to be operated on, so a psychically ‘analgesic’ drug, which lowers the intensity of the reaction to.... unpleasant emotions . . .[,] allows a patient to explore painful areas of experience” (Kubie & Margolin, 1945, pp. 147–148). Sargant, by contrast, regarded these drugs as acting directly on the autonomic nervous system. On this account they prevented it from producing the nervous response to fear that was triggered by his patients’ deeply traumatized states. “One feels afraid with one’s belly and not with one’s brain,” Sargant and Slater (1944, p. 90) declared. (A certain degree of empirical support for this was obtained during the harrowing months of the Blitz in 1940, when his hospital’s staff and patients seem to have routinely imbibed cocktails of sodium amytal to help see them through; Sargant & Slater, 1944.) Blocking the somatic responses to fearful stimuli would therefore help traumatized soldiers recover. In an amytal-soothed state, they could rest, recover, and reflect on their experiences. This last, incidentally, was more emphasized in practice than Sargant’s published discussions indicated: Although he did not stress the role of conversation in patients’ recovery, his records indicate that the

¹⁰ For two excellent discussions of Sargant’s work in the context of theories of trauma (with subtle comparisons between Sargant and other psychiatric practitioners of the 1940s), see Leys (2000, chap. 6). For an account of Sargant within the broader social history of psychiatry in the two world wars, see Shephard (2000).
evaluation of patient narratives, including recovered memories, was clearly a central part of his actual treatment when he used amytal. But the drugs were nonetheless the central component. Without them, patients often could not bring themselves to articulate painful experiences—or, in extreme cases, even to remember them at all (Kubie & Margolin, 1945; Lambert & Rees, 1944).

Sargant had a film made to document the practices at Sutton Emergency Hospital. The result exemplified how the medium could be used powerfully to evoke the phenomena of amytal treatment. It had to, because Sargant’s work at Sutton was only one of two poles of psychiatric practice emerging around London during the war, and they had become rivals. Sargant’s previous base, the Maudsley Hospital in London, had been evacuated, and its staff was divided between Sargant and his colleagues at Sutton and Aubrey Lewis and his team at Mill Hill, and the two teams pursued different approaches. In the early 1940s, Sargant was struggling to prove the superior benefits of the new physical treatments over those advocated by his colleagues, whom he regarded as obstructively conservative—and over the therapies of the psychoanalysts, too, which he considered utterly ineffectual. He was also adamant about protecting his intellectual property in his treatments. Sargant’s 1942 film, “The Treatment of War Neuroses,” served all of those purposes. It was used during the war to build support for Sargant’s unusually extensive use of new physical treatments. After the armistice he continued to use the film in training psychiatric residents as late as the 1960s (M. Clarke, personal communication, August 2003).

“The Treatment of War Neuroses” was structured to appeal to unspecialist and psychiatric audiences alike. It began with a brief history and a tour of the Sutton Emergency Hospital facility, beginning with the grounds and working inward. The body of the film then consisted of a series of patient treatments. The most extensive example was a case of memory recovery in a patient with “functional amnesia.” The patient is a survivor of the HMS Lancastria. Our first glimpse of him is at the beginning of the treatment, when he is given an injection of an intravenous barbiturate, although the film does not specify which one. A voice-over provides a running interpretation of the changes as they take place. Viewers see a head-and-chest view of the patient, who is speaking (although his speech is not audible), and they hear that “under the drug, inhibition goes. He is being persuaded to tell the story of his experiences during the sinking.” The viewer’s attention is called to the fact that the patient becomes more animated as he speaks: “Note the increasingly lively gesturing as his memory clears.” Unlike Bleckwenn—and unlike “Combat Exhaustion,” which I discuss more below—Sargant gives a continuous view of the development of the narcoanalytic state and the process of recall. At the end of this sequence, however, he too provides a pair of before-and-after shots extracted from the longer sequence. In the first, viewers

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**Note:** For an example of how fiercely Sargant could fight to establish priority, see a flurry of letters in the William Sargant Papers, PP/WWS (Wellcome Library for the History of Medicine, London). For instance, in a letter to Col. Thompson dated October 28, 1943 (Sargant, 1943a), and in another letter to “Henry,” dated October 29, 1943 (Sargant, 1943b), he complained that credit for physical treatments for war neurosis were being implicitly granted to Capt. Frederick Hanson rather than to Sargant; Sargant was aggrieved, he wrote, that his credit was being “pirated.”
see the patient just before the injection. He is tense and twitching, his face slightly contorted. In the second shot, he is relaxed, calm, even smiling. This juxtaposition is all the more effective because viewers have seen the two shots before. The stark differences between them now powerfully impress on viewers the transformative power of Sargant’s treatment. The scene finally ends with the same patient a week later—a longevity of coverage never portrayed by Bleckwenn—looking cheerful and conversing with someone offscreen. By implication the interlocutor is a therapist, but his absence encourages the sense that who he is does not matter—the patient can now act socially with everyman.

In gazing upon the drugged behavior of this patient, one is meant to apprehend not a phenomenon of the drug but a transparent view of the individual in his most authentic state. In fact, Sargant’s patient records reveal that he used amytal both as a sedative and as a means of revelation—in the hope that his patients would be able to recover lost memories, of course, or that they might be able to express memories that were too traumatic to discuss in an ordinary state of mind. However, he also made more sweeping reference in case notes to a moment when there occurred an “interesting revelation of personality under this injection” (PP/WWS, Wellcome Library for the History of Medicine). Before the use of amytal, the notes describe this particular patient in somewhat vague but skeptical terms: He or she is said to be “depressed” and “hysterical,” lacking in energy and initiative. Under the influence of amytal, though, the same patient became “extremely negative–aggressive.” The revelation to which Sargant referred was behavior “like a spoilt child, whining, demanding attention, alternately threatening and asking for Dr.’s sympathy and then shouting for sister.” Instead of regarding the changed behavior as a creation of the drug, he regarded it as the real self, the core personality stripped bare by the trance.12

In the U.S. military, meanwhile, psychiatrists Roy Grinker and John Spiegel had coined the term *narcosynthesis* to describe their own therapy for such trauma. Grinker and Spiegel, unlike Sargant, used sodium pentothal within a psychoanalytic framework similar to Horsley’s. Beginning with the grim Tunisian campaign, their approach spread rapidly in the U.S. Army. It was eventually used throughout the European theater.13 During this period a number of films were made by the U.S. Army, too, to train field medics in how to diagnose and treat psychiatric disorders. “Combat Exhaustion,” made by the U.S. Army’s Signal Corps in 1943, is one of these.

“Combat Exhaustion” was very widely used indeed, for it was at the forefront of a huge shift in military psychiatric policy. In 1943 and 1944, there was an intense effort to give a rough-and-ready psychiatric training to a great many field medics when the armed forces suddenly shifted gears in their psychiatric policy. In the early years of the war, policymakers had assumed that soldiers displaying

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12 Patient record from Belmont Emergency Hospital (Papers of William Sargant, PP/WWS/E/3, boxes 10–11, Wellcome Library for the History of Medicine, London). The patient records are sorted alphabetically by patient name and are unpaginated, so for reasons of confidentiality no precise reference is given here. Please contact the author for more information about how to locate this source.

13 Grinker and Spiegel’s many medical papers on this subject were revised, repackaged, and presented as a general thesis about the effects of trauma on the mind in their well-known book *Men Under Stress* (Grinker & Spiegel, 1977).
signs of psychiatric problems should be considered constitutionally unfit to serve; in late 1942, the rate of discharges was so great that some doctors warned that as many as half the troops might ultimately be lost to psychiatric problems.\(^{14}\) The discharge policy was frozen, and rehabilitation was now the order of the day. However, there were few psychiatrists on active duty, and they were already swamped with patients. Training programs were hurriedly set up to make it possible for a larger number of medical practitioners to participate in what was essentially a new program of rehabilitation for psychiatric war casualties. Frontline medics were given 1 week of instruction in “first aid psychiatry,” and because of the great shortage of psychiatrists much if not all of this information was communicated to them through film and text. “Combat Exhaustion” was available “in each army as well as in Communications Zone,” according to military records, along with a series of “Technical Bulletins” that were distributed widely in the theatre.\(^{15}\)

The first agenda of “Combat Exhaustion” was to dispel prior assumptions that battle trauma stemmed from personal weakness or cowardice or that apparent sufferers were malingering. The next was to supply them with a very specific diagnostic and therapeutic framework for understanding the nature of trauma. It used actors to stage a visit by medical trainees to a psychiatric hospital. The trainees are first given an introductory lecture in the demographics and taxonomy of psychiatric casualties, including the striking statistic that 20% of war casualties suffer solely from psychiatric problems. The lecturer uses a phrase common to the psychoanalytic understanding of battle exhaustion during these years. “All men have their breaking point,” he remarks, and when they are stressed past the point of endurance—a point that varies from individual to individual—they show the kind of symptoms that attend exhaustion. The framework within which the symptoms are then to be understood is straightforwardly psychoanalytic. The argument is that ideas that cannot be admitted into consciousness are expressed indirectly through psychosomatic problems bearing some associative relation to what is being repressed. Alternatively, the inability to tolerate a traumatic memory could trigger a more sweeping problem of self-expression, in the form of aphasia.

After this introductory lecture, the trainees tour the wards, examining individuals suffering from the various disorders discussed in the lecture. The most important category of psychiatric ailment, and the only one whose treatment is shown in the film, is a form of hysteria in which memory is impaired and/or

\(^{14}\) Norman Q. Brill’s (n.d.) memo “Neuropsychiatry—Hospitalization in the zone of Interior” claims that, from the point of view of hospitalization, the war can be divided in two periods: The first was mobilization, from 1940–1942; the second was combat, from 1942 to the “end of the emergency.” During the first part, hospitalization mainly centered on station hospitals; in the second, it was concentrated in “general and convalescent hospitals” (pp. 1–14; see also Challman, n.d., pp. 1–14). Both sources can be found in the Historical Manuscripts file, section on “Psychoneuroses,” National Archives and Records Administration, Washington (NARA), DC.

somatic complaints produced by a repressed memory of trauma. The star of the show is a soldier who suffers from back pain and cannot walk. No somatic cause for his difficulties has been found. The medical instructor explains that sodium pentothal can place the patient in a state in which his memory can be recovered and the traumatic event “integrated” into the subject’s conscious mind and personal identity. As the students (and the film’s viewers) look on, the hysterical symptoms are removed by this process of “synthesis” and “integration”: the patient slips into the pentothal trance (see Figure 8), whereupon his memory suddenly and violently returns.

Like Bleckwenn’s catatonia film, the abrupt scene-switching here helps to structure and intensify the display of a dramatic therapeutic effect. A flashback scene further supplies audiences with a staged performance of the recalled memory that is more engaging than would be a narrative delivered by the patient. The film actually cuts to an intense battle scene in which the panicked soldier is alone and expects to die at any moment (see Figure 9). The onset of his hysterical symptoms is shown at the end of this scene, which is several minutes long. With the help of the doctor, he retains his memory of these events as he emerges from the pentothal trance, and the restored memory begins to replace his physical symptoms. The patient initially fears that he will be unable to sit up, but he is told that the pain is gone; he sits up and smiles with surprise at his accomplishment (see Figure 10). He is then told to get up and to “walk like a soldier” (see Figure 11). Soon after, he appears confused: This is a sign that the effects of the drug are wearing off and that he is returning to full consciousness and the beginning of a full recovery. This pentothal treatment and the abreaction it induces is the climax of the film: With the patient’s recovery, the presentation ends.

Figure 8. A soldier is given an injection of sodium pentothal and asked to count backward from 100. He becomes unconscious within moments. Still from “Combat Exhaustion” by Signal Corps, U.S. Army, 1943. In the public domain.
As mentioned above, “Combat Exhaustion” was widely used in medical training. The purpose was to produce a corps of medics who could look for a specific set of symptoms and diagnose them confidently, rather than approaching all such cases with a suspicion that patients were merely shirkers, cowards, or frauds. The combination of film, text, and drugs supplied untrained medics with a simple package for diagnosis and treatment. Specific recommendations on the benefits of sodium amytal and pentothal were made within these briefings, including exhortations that soldiers needed immediate treatment for trauma (within hours or days rather than weeks). Medical units were given supplies and standard dosages of amytal and pentothal that made it easy to put these recommendations into practice, particularly because the same drugs were used, at different dosages, as surgical anesthetics.16

One result of giving field medics a very clear depiction of psychoneurosis, and cautioning them that sufferers were not to be treated as cowards, was that individuals who did not fit the mold came under suspicion. A well-defined set of diagnostic criteria for neurosis made doctors confident that they could properly separate the truly ill from those who were merely faking. This need for a distinguishing practitioner was a major motivation behind the film. In consequence, one result of the filmed link between pentothal/amytal and neurosis was

Figure 9. A moment during a flashback scene brought about by the pentothal trance. Here, the soldier is alone in a foxhole, terrified by mortar fire and his solitude. At the end of this scene he begins screaming that his back hurts. Still from “Combat Exhaustion” by Signal Corps, U.S. Army, 1943. In the public domain.

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a change in the conventions used for routine diagnosis. Military doctors expected a specific range of reactions from traumatized soldiers who took amytal. What they considered to be normal and appropriate set the definition not only of what course of treatment would cure their patients but also—in circular fashion—of where the limits of neurosis lay. Indeed, neurosis, which had long been a rather broad and slippery category, now came to have a specific definition in the work of many Army doctors. It was that condition which was temporarily ameliorated by the application of sodium amytal. An inappropriate or adverse reaction to treatment suggested that no neurosis existed and that the patient was malingering (Hoch, 1942, 1946; Lennox, 1943; Lipton, 1950; Ludwig, 1944; Morris, 1945; Oliver, 1947). Individuals suspected of feigning amnesia were said by some doctors who judged their cases to “refuse” to speak while under the influence of the drug, whereas a “real” amnesiac would have poured forth a stream of memories in welcome relief.

The American military doctor Captain Alfred O. Ludwig took this rule of thumb to its logical conclusion by publishing a formal technique for exposing malingerers. Any doctor with considerable acquaintance with war neuroses would be “immediately struck by the atypical and forced nature of the simulator’s behavior,” he wrote; “Soldiers with anxiety states show monotonously similar symptoms” (Ludwig, 1944, p. 380):

They are tremulous, tense, restless, and at times agitated and tearful; they are sensitive to even slight noise, sleep and eat poorly and tend to be reclusive and withdrawn. On the other hand, the malingerer strives to attract attention in the

Figure 10. The soldier in the process of awakening from his pentothal trance. During this intermediary period, he is given suggestions (“You can sit up now . . . your back is straight and strong”). He seems conscious but not truly awake at this point. Still from “Combat Exhaustion” by Signal Corps, U.S. Army, 1943. In the public domain.
ward, makes himself conspicuous by dramatic exhibition of his symptoms, asks for earlier attention or special favors and often becomes unruly, argumentative or subordinate . . . Under narcosis, [patients suffering from hysteria or anxiety] talk freely . . . The amnesic material is usually recovered and the patient relives the traumatic episode with convincing realism. The malingerer resists narcosis, fearing that it will make him tell the truth. Narcotized, he fails to show any of the productivity of a neurotic patient and combats any effort to recover his lost memory with . . . negativism. (Ludwig, 1944)17

The exposure of malingerers thus hinged on the experimenter’s observations of the subject’s manner—observations calibrated by reference to filmed archetypes of precisely the kind manifested in “Combat Exhaustion.” For instance, one soldier who claimed to be amnesiac was twice given amytal, a technique which, according to Ludwig’s experience, routinely brought back lost memories to amnesiacs. “Both times he refused to answer questions at all or he answered with ‘No more questions; don’t ask any more questions.’ It was impossible to obtain any information about the accident or about his personal life” (Ludwig, 1944, p. 380). The soldier was diagnosed as a fraud because he did not react in the manner expected of patients committed to amytal treatment. And he eventually did confess to malingering, although not until after he had been moved to two successive hospitals, and so presumably had not been under Ludwig’s care for some time.

17 For a discussion of the history of the evaluation of similar issues of malingering since the mid-19th century (from the perspective of a practitioner of neuropsychiatry), see Trimble (1981).
Ludwig was one of many military doctors to use amytal as a truth-teller—not as a technique for making a suspect speak the truth, that is, but as one for making the subject’s behavior betray the true state of his or her mind and body. Amytal thus became well known as a litmus for distinguishing between the truly ill and those who were malingering. Indeed, before long it was seen as better suited to the diagnosis of malingering than to the extraction of accurate narrative confessions. This is ironic, because in cases of malingering what was being produced by the amytal treatment was not narrative truth, or indeed statements of any kind, but a form of withdrawal that doctors regarded as a sign of concealment. This became a characteristic of amytal treatment: Records of narrative confessions themselves were more rare, and more open to protest, than the interpretation of a subject’s manner during an interview in which he failed to confess. The lack of a confessional state was confession in itself.

Exposés of this kind were made much more likely by—and perhaps could not have happened without—the very strong identification between barbiturates and successful trauma treatment. The majority of field medics had little or no previous psychiatric training, and individuals with a prior background in the use of pentothal in psychiatric interviews were not sufficiently plentiful in the Army to train very large numbers in the use of the pentothal interview. Some tool for more widely distributing part of the work of enculturation was therefore needed. In practice, medics got their template for diagnosis and treatment of psychoneuroses through brief training sessions featuring films such as the ones I have discussed. They thus played a great role in determining what counted as a neurosis, what was malingering, and what was an appropriate response to treatment.

From Psychiatric to Social Self

This identification of trauma with the transforming power of a fast-acting narcotic technique was most powerfully evoked in a documentary made in 1945 about the psychiatric treatment of veterans. John Huston’s “Let There Be Light” was commissioned by the U.S. Army. Huston was told to produce an account of acute war neuroses that showed sufferers to be ordinary people placed in extraordinarily stressful circumstances and that demonstrated the power of psychiatry to help bring them back to a strong and capable mental state. According to one Huston historian, the Army’s explicit purpose was to call on the power of film to reassure a nervous public—and potential employers of veterans in particular—that recovering soldiers were not “dangerous lunatics or permanently damaged personalities” but selves capable of full social existence (L. Brill, 1997; Farber & Green, 1993; Gabbard & Gabbard, 1999). It is ironic that the technology of representation Huston adopted was so powerful that the Army decreed its suppression.

Huston’s strategy was to spend a great deal of time in the Mason General Hospital, getting to know patients individually and placing their experiences and their voices center stage in the film he eventually produced. He became deeply involved in hospital life, even learning hypnotic technique well enough that he was asked to stand in for the staff hypnotist, Col. Simm, when he was not available (Grobel, 1989). The film was shot entirely within the hospital. It recorded interviews with real patients, whose stories it tracked over 2 months.
Huston filmed each scene very simply, without moving in and out (as had been done in “Combat Exhaustion”) and with minor use of background music. He used long, uninterrupted takes. The result implied that patients themselves were telling their stories without interference and that their experiences were being conveyed with direct, unedited immediacy and veracity.

Hypnotic treatment (usually via pentothal) occupies a pivotal place in “Let There Be Light.” It is heralded in the initial introductory text and centrally positioned in the main part of the film. Indeed, this aspect of psychiatric treatment captured Huston’s imagination with the power of “a religious experience” when he read about it during his preparatory readings of psychiatric literature (especially the psychoanalytic writings of Freud, Jung, and Adler; Huston, 1980, cited in Shortland, 1987, p. 431). This is clearly conveyed in the film itself. Film historians have found elements both of film noir and of a therapeutic mode within this work. The hospital, for example, is both eerily alienating and also the site of great, and justified, optimism. The reason for this is that its theme is not just that of recovery from illness but the addressing of questions of existential meaning and identity. As one of the early voice-over statements puts it, each patient is to be understood both as unique and as embodying universal characteristics of humanity and human experience. The recovery of an individual soldier shows that the return to one’s real, whole self is possible after terrible experiences—and that possibility carries implications for human nature in general.

There are several examples of pentothal and hypnosis therapy in the film, each more dramatic than the last. Although the therapy’s power takes a far subtler form than the pentothal interview in “Combat Exhaustion,” and the experiences conveyed are more specific than in “The Treatment of War Neurosis,” the structure of each scene is similar. The fulcrum is a technique that quickly transforms the patient from one state to another—not just from a waking to a trance state but from a dislocated to an anchored one, a false to a true. It is shown restoring something that is visibly lost or out of kilter with respect to the patient’s normal, true functioning.

The first case is a man diagnosed as suffering from psychosomatic partial paralysis. No somatic cause has been found for his inability to walk. Under pentothal treatment, he regains strength and functioning in his leg, although despite the efforts of his doctor he does not produce any new memories that would explain the initial loss of function, or a source for his neurosis more generally. In the second case, the doctor uses hypnotism to help a man suffering from complete amnesia. This time, the results live up to the ideals of narcoanalysis: We see him being placed in the hypnotic state (see Figure 12), after which he immediately responds to questions about his battle experience. At the end of the tale he is asked his name, and he supplies it, along with the names of his family. He is roused from the trance, and the scene ends with the camera pausing for a moment on his expression of happiness and relief (see Figure 13).

The last clinical example is another pentothal interview. Although this man’s symptoms are less disabling than those of the other two, his response to pentothal is more dramatic. He has been diagnosed with hysterical stuttering. His speech

was fine at some time in the past, but by the end of the war he showed great difficulty in speaking. Almost immediately after the injection of pentothal, he cries out, “My God, I can talk! I can talk! I can talk!” (see Figure 14). His relief and astonishment supply the kind of overt dramatic material that is lacking in the more subdued manner of the previous two patients. After a few moments, he calms down enough to converse about the history of his problems, and he is able to pinpoint the time he first began to have problems and to remember that they began with an inability to pronounce the “s” sound. After further prodding, he makes an association between this sound and the sound of German artillery fire; a voice-over helpfully supplies a sinister evocation of how this might have sounded to him (a rapid, rhythmic sound, “ss-ss-ss-ss”). This last scene is one long, unbroken take, enhanced only by a brief explanatory voice-over toward the end, and brief moments of string music to accentuate climactic moments.

It is useful to consider the differences between therapy and trance phenomena as shown here and their appearances in the two previous films. The doctors behave similarly in all three, but the portrayal of patients is quite different. Huston’s real soldiers display far less openly dramatic behavior than the actors in “Combat Exhaustion,” and of course there are no moments of comic relief (the training film sprinkled a couple of these into the pentothal session). Yet the cumulative effect is for that reason surely more intense. The amnesiac soldier’s manner as he is recounting his experiences lacks the overt drama and noise of the actor in the training film, but his shaking body and voice have a greater, though subtler, efficacy, a low intensity that is very affecting to watch. These scenes convey a
sense of real human beings, individuals who might have been one’s neighbors, struggling in a believable way with personal problems. The patients’ behavior is far more similar to that of the patient in the Sargant film, but again Huston eschewed the overtly didactic before-and-after shots that Sargant used to guide his viewers’ interpretations.

Given the Army’s objective to provide a picture of recovering veterans as real, capable human beings, one would have expected that the film would have served the purpose. In fact, however, it was confiscated moments before the scheduled first screening and then withheld as “highly classified” for more than 30 years until it was released by a special order from Walter Mondale in 1980. As I indicated earlier, there were multiple complaints that the Army could not bear the vulnerability the film revealed in its subjects (L. Brill, 1997). The price of portraying recovering soldiers as ordinary people was that apparently battle itself was revealed as too wearing and emotionally costly. One piece of supporting evidence comes from the Army’s similar, though shorter term, reluctance during the war to allow the publication of printed texts with similar messages. Grinker and Spiegel’s (1977) canonical work *Men Under Stress*, for instance, was typed up in its finished form years before it was actually released as a widely published trade book, but typescripts in Army archives are stamped “Secret”—a decision that seems bizarre given the widespread professional literature on the subject in both military and medical periodicals. Huston’s powerfully moving film, with its strong personal emphasis on the experience of individual soldiers, must have seemed exponentially more risky than Grinker and Spiegel’s (1977) accessible but rather dry tome.

Another indication of what really worried the Army is given by the differ-

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*Figure 13.* In the closing shot from the hypnosis scene, the patient’s memory and identity have returned, and when he is awakened from the trance the camera lingers on his expression of relief. Still from “Let There Be Light,” by J. Huston (Director), 1946. In the public domain.
ences between “Let There Be Light” and the film that the Army produced a few years later as a substitute for it, “Shades of Gray.” This was a far more didactic film, with none of the direct scenes presenting patients in distress and altered states of mind. The comparison implies that it was the filmed images of men in traumatized or drugged states that seemed so dangerous—so powerful that they might imperil public support for the military. This fear may have been accentuated by the status of the armed forces just after the war. By 1946, the Army was reduced by more than 1 million troops, and by the spring of 1947 it was down to 600,000 from over 2 million. It was a time of significant anxiety in the upper administrative ranks of the Army, as major organizational changes were discussed and major spending cuts took effect. As one military historian put it, the Army “suffered increasingly under a sense of its own irrelevance” (Weigley, 1984, pp. 486–500).

As many historians have noted, the late 1940s and 1950s became the golden age of psychoanalytic films, including such classics as “Shadows on the Wall” (1950), “Knock on Wood” (1954), “The Cobweb” (1955), and “Fear Strikes Out” (1957; see Shortland, 1987). Of course, the most enduringly popular of the psychiatric films, Hitchcock’s “Spellbound” (1945), was produced just at the end of the war and used a representation of acute neurosis very similar to that

Another significant postwar film to mention here, although it was released a decade later, is “Captain Newman, MN” (1963), in which Gregory Peck plays a psychoanalytic psychiatrist in a 1944 veterans hospital. His role was modeled after the famous psychoanalyst Ralph R. Greenson (see Farber & Green, 1993, pp. 84–85).
emphasized in wartime psychoanalysis. In assuming a widespread familiarity with key psychoanalytic notions, such as the explanation for acute neurosis, such films displayed their debt not only to wartime psychiatry but to psychiatry of a very particular kind. Filmmakers of the 1940s and 1950s were also particularly interested in the use of flashback devices, a phenomenon that film critics have noted but never explained (Turim, 1989, p. 112ff). Thus, the debts of film to psychiatry may have been deeper and more reciprocal than even Hitchcock suspected. Such psychiatry, as we have seen, itself rested partly on the crafting of film.

**Conclusion**

The images produced by a motion picture film are, according to Münsterberg (1916), “clothed in the forms of our own consciousness.” A viewer of “Vertigo” or “Let There Be Light” might have responded “yes” a generation later, and our own consciousness in turn has been clothed in the forms of film. Hundreds of psychiatrists could closely examine the behavior of Bleckwenn’s patients as if they were standing, at some points, less than a foot away from each one. Thousands of medical practitioners could share in the shocking onset of (staged) “memory” and gaze on the patient’s tortured expression from an apparent viewpoint at the bedside bending closely over him. Hundreds, perhaps thousands, of students, administrators, and psychiatrists watched from less than 2 ft away as Sargent’s patient was transformed innumerable times from a twitching wretch into a confident, relaxed, and cheerful soldier. Also, had it not been suppressed, countless more could have sat beside the subjects of hypnotic and pentothal interviews, closer to the patients than the doctor himself, with Huston’s “Let There Be Light”—and then they could have the projectionist rewind the film so they could experience it again. In Münsterberg’s (1916) terms, audiences were able to gain a visceral sense of the transformative power of chemically induced altered mental states by the magical way in which film objectified sensation, embodying acts of attention in the choice of shots and the proximity of the camera, and in some cases by scripted voice-overs.

There was a reflexive relationship between understandings of how film conveyed meaning and actual uses of film to convey a message about meanings in the human mind. According to Münsterberg (1916), film functions like the mind: It is a medium that can operate like internal processes, and this is how it manages to bring to viewers’ minds the (apparent) content of another person’s consciousness. But perhaps this attribute not only helped people to know what the other person thought but also how that person thought. Another way of explaining this has to do with the role of film and mind as media. The psychiatrists and neurologists discussed in this article wrote of altered states of mind as a medium—a conduit through which psychological meaning was made manifest and a frame of reference in which thoughts took on particular meaning. Perhaps, then, the medium of film was an appropriate means of documenting and studying the media of mind, and not just particular messages.

These kinds of possibilities, outlined by Münsterberg (1916) and elaborated by so many later reflections on film, touched directly and centrally on the challenge of conveying to an observer processes that are internal to a subject’s
that is, they directly confronted the central problem of how to capture ineffable qualities that are notoriously difficult to evoke (especially in nonfiction work) by a string of words or still images—for instance, the ways in which emotion or states of mind are expressed in bodily movements and posture. Of course, film could not escape all questions of evidence, but in this field, at least, there was no other medium able to do better. And, of course, this was only one of a vast range of possibilities for how film could be used in scientific work, but it was an unusually consequential one. Within the notoriously elusive area of the study of mental phenomena, these conventions allowing for a sort of visual circuit of intimacy represented something distinctive for psychologists, psychiatrists, psychotherapists, and other practitioners, not the least of which was that they encouraged the use of film as a model for mental functions themselves. Although a detailed discussion of this subject is beyond the scope of the present article, it is worth noting that Grinker and Spiegel (1945a) wrote of recovered memories that patients delivered them like a vivid recording of the original experience. In the same period, neurosurgeon Wilder Penfield updated William James’s notion of the flowing “stream” of consciousness by portraying memories as a permanent record, a “thread” that could be accessed again and again (Penfield, 1954).

An appropriate place to conclude this article, however, is with another film, one that appropriated the conventions of representation from the tradition discussed in this article and put them to powerful paranoid–satiric effect. “The Manchurian Candidate” (Frankenheimer & Axelrod, 1962) tells the story of soldiers who have—unbeknownst to them and, initially, to the film’s audience—been brainwashed after being captured on sortie in Korea. The film unfolds as the memory of these events in Korea comes back piecemeal for a soldier during a series of nightmares, and he begins to be aware of the fact of his brainwashing.

The most famous part of the film, now known as the “flower lady” scene, gives viewers a powerful sense of ambiguous or conflicted consciousness. It is a recurrent nightmare experienced by one of the major characters, Capt. Marco. His conscious memory tells him that one of the men under his charge during his period of service in the Korean War, one Raymond Shaw, acted with extraordinary bravery in saving the company from an entire troop of Chinese soldiers; the whole group was saved, with the exception of two who were killed during the action. In the nightmare, the entire group is sitting in what they believe to be a hotel lobby, trying to be polite as they listen in boredom to the proceedings of a conference of ladies who have come together to hear a lecture on horticulture. As the camera slowly pans around the room, beginning with the soldiers and the prim old dear who is giving a lecture on the best locations to plant hydrangeas, the ladies are suddenly replaced by Chinese and Soviet officials, and the hotel lobby with a tiered lecture space. By the time the camera comes full circle to focus on

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20 I am indebted to Jarvie’s discussion of Münsterberg (Jarvie, 1987, pp. 69–95) as well as to Jarvie in my understanding of more recent developments in this field (Jarvie, 1987, pp. 69–137; see also Bordwell, 1997, pp. 46–82).

21 For example, Greg Mitman’s (1999) study of nature films demonstrates how film could provide a range of other powerful tools (somewhat different from those described here) in constructing a vision of nature for a particular audience or audiences.
the speaker, she has been replaced by a Chinese scientist (Dr. Yen Lo), who is delivering a lecture on the power of brainwashing, which is being demonstrated on the soldiers. The supposedly heroic Raymond Shaw is the most carefully programmed of the lot, and during this scene he follows instructions when he is told to strangle one soldier and then shoot another. Director John Frankenheimer’s visual techniques evoke a sense of psychological bad faith—a sinister feeling that what one sees is not the truth, and what one remembers is false. Capt. Marco is experiencing two incompatible versions of his own memory at once.

The portrayal of brainwashing offered in this film resonated with audiences, who regarded it as providing a scathing satire of McCarthyism. But it worked partly because it made the most of what had become a serious craft of representing in film the powers of science to alter the mind. The proof—at once ironic and demonstrative—of this is that in later years the flower lady scene came to be regarded as a better representation of such phenomena than any merely documentary footage, let alone verbal description (Hoberman, 1993). However, it would be altogether too ironic if Frankheimer’s skillfully made fiction encouraged people to erase the history of filmic and scientific craft that lay behind it and made it possible, along with the concepts of mind, memory, and self that it used to such effect.

22 The scene was used in at least two television documentaries on brainwashing: (a) a 1979 documentary by ABC on CIA mind control research and (b) a BBC documentary on the same topic, entitled “The Living Dead.”

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Received August 11, 2003
Accepted January 6, 2004