

SHEDDING LIGHT ON OPERATING ROOM MISPERCEPTIONS: THE SEMIOTIC
LEGACY CREATED BY SIDNEY KINGSLEY'S *MEN IN WHITE*

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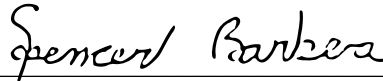
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Abstract

This thesis examines the inaccurate representation of operating rooms in television, cinematic, and theatrical medical drama over the last hundred years. The schema of what a modern day operating room looks like that is held within the public consciousness has been distorted into a dimly lit, quiet, and stressful environment by generations of dramatized settings. This model of depicting an operating room originated in Sidney Kingsley's 1933 Group Theatre production of *Men in White*, and was popularized by the 1934 film of the same name. This topic is particularly pertinent because operating room representation in television medical drama is understudied, and inaccurate perceptions on the realities of surgery can undermine patient-centered decision making in clinical settings by distorting how patients view their treatment options. In chapter one, a brief history of surgery in the United States of America is discussed, and a comprehensive history of prime-time network medical drama is outlined. In chapter two, the differences between surgery as it is represented in medical drama and the reality of surgery are compared, drawing on examples from popular contemporary medical drama and real world health care professionals. Also in this chapter, a brief discussion of patient-centered decision making, and the ramifications that inaccurate media representation has on that model of patient care. In Chapter 3, a detailed analysis of the operating room scene in Sidney Kingsley's 1933 play *Men in White*, and an analysis of the operating room scene in the 1934 film version of *Men in White* are conducted to show the origin of sparse lighting design, auxiliary technological noise, and terse directive dialogue in operating rooms.

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Introduction

Many people in the United States who have never had in-person exposure to formal healthcare settings, such as an operating room, have incorrect perceptions of the field of medicine, that may stem in part from inaccurate media representation and television medical drama. In contemporary televised medical drama, inaccuracies run rampant, particularly in the depiction of operating rooms. These inaccuracies proliferate into our public consciousness and understanding of the realities of surgery. These false medical perceptions include overestimating how much healthcare professionals are paid, underestimating the autonomy healthcare providers have in their work, being ignorant of the current state of private and government insurance that defines much of a healthcare provider's practice, mortality resulting from surgery, the efficacy of cardiopulmonary resuscitation (CPR), and the homogenous personality traits of certain types of healthcare providers. Among these misattributes stemming from inaccurate media representation, none have faced greater distortion than the reality of a modern operating room as it compares to those depicted on modern television.

Surgery is perhaps the most dramatized aspect of medicine. Over the years, it has been delicately forged from a mundane series of procedural actions into a widely misunderstood and dramatically-intense subject matter. These misconceptions of the mundanity of surgery among the public potentially stem, in part, from the inaccurate depiction of what surgery looks like in our media. It is also a byproduct of the deliberate distortion of the anatomy of a modern-day operating room by television and film directors, who opt for a more dramatically-interesting setting to achieve a desired

aesthetic that evokes a heightened emotional response of focus and suspense from their intended audiences.

The dramatized operating room came to fruition through many colliding factors over a long interval of time. The seemingly mundane space, which is in reality is illuminated with the utmost intensity, was warped into a ferociously dark and macabre lair of distorted dramatic magnitude over years of integrating specific symbols into the set design of how to stage a television operating room. The perceptions of surgery that exist within society today stem from the semiotics of how operating rooms are represented in television medical drama, which for the purposes of this thesis can be defined as any primetime-network doctor series. In order to fully comprehend the semiotics of how a contemporary television operating room is created, it is necessary to understand both a brief history of medicine in the United States, as well as a brief history of the preceding plays, films, and television shows where modern-day medical drama has its roots.

The 1934 film *Men in White* is particularly significant in tracing the lineage of shadowed lighting, auxiliary technological noise, and terse dialogue in contemporary operating room depictions because the film is the first instance of these design elements being integrated into the portrayal of a clinical setting on screen. Until the release of *Men in White*, the symbols of a dark quiet room with auxiliary technological noises were used in previous pieces of film, most prominently in the laboratory of Dr. Frankenstein in the 1931 film *Frankenstein*. However, the science-fiction premise of the narrative in *Frankenstein* is removed from reality, and the audience can fully identify the production elements that are not grounded in truth. Similarly, physician characters and clinical

settings existed in plays and films long before *Men in White*, such as 1931's *Arrowsmith* and 1932's *Late Christopher Bean*, but these works make no mention of surgery or operating rooms. *Men in White* was the first piece to breed the theatrically-heightened symbols of a dark lighting design and auxiliary technological noise, with the clinical lens of physician characters and the setting of a hospital operating room.

First in this thesis, the history and development of modern surgical technique will be examined, in order to accentuate the dangerous operations of the past in which the public consciousness of surgery has its origins. Then, the thesis will transition to evaluating the proliferation of televised representations of surgery, examining visual and aural aspects shared between multiple shows and genres. In this section also, the design elements of television operating rooms that are factual will be separated from those that are fabricated. Finally, the origins of the inaccurate symbols that exist within the contemporary depiction of operating rooms, first beginning in Sidney Kingsley's 1933 play, *Men in White*, and then translating to the 1934 movie of the same name, will be explored.

Chapter One: A Brief History of Surgery & Medical Drama in the United States

Despite the fact that the term “surgery” has been used for hundreds of years to describe the treatment of injuries or disorders of the body by incision and manipulation, the surgery that occurred hundreds of years ago was drastically different than the operations in the hospitals and medical centers of today. Operations differed from those of today especially with respect to continuity across providers, safety of the patients undergoing operations, and most importantly, patient outcomes. For the majority of recorded history, surgery was extremely unsafe and blatantly painful to the patient, as well as the practitioners. The dearth of safety in surgical procedures up until the mid 1800s is a multifaceted issue, combining the limitations of medical science, as well as the non-existent standardization of medical education. In order to fully comprehend the semiotics of how operating rooms are depicted in modern-day television medical drama, it is imperative to examine the origins of our public consciousness of surgery itself, which has its roots in the hazardous operations conducted in the past.

The invention and wide-spread adoption of two surgically-reforming measures, anesthesia and aseptic technique, drastically altered the procedural outcomes and patient experience during surgical operations. For thousands of years before these advancements, surgery was aptly regarded as extremely dangerous, frequently resulting in debilitation and death (Fitzharris 17). It is important to comprehend the sheer magnitude of the contribution that aseptic technique and anesthesia have made to surgery, and also what the field was like prior to these advancements.

The first of the advancements that augmented the safety of surgery was aseptic technique, which was invented by Dr. Joseph A. Lister in the 1800s (Chisnall). Aseptic

technique, dubbed by some as the concept of sterility, is the effort made to prevent the contamination of a wound by pathogens during an operation. This goal is achieved by implementing a number of smaller measures during the care of the patient to minimize the risk of infection, including ensuring that surgical instruments are properly sterilized, maintaining the baseline cleanliness of an operating room, mandating healthcare professionals wash their hands prior to an operation, and that they also don gloves and proper gowning during an operation. In the modern world, the principles of applying sterility for good surgical outcomes are blaringly intuitive; but, at the time when Lister was practicing medicine, microbiology and germ theory were largely still in their infancy, and aseptic technique was an utterly revolutionary principle.

As with most radical attempts at systemic change in medicine throughout history, Lister's aseptic technique was met with swift and heavy opposition from all directions (Fox). Operations were difficult for surgeons to perform as it was, and applying a stringent checklist of superficially laborious tasks to prevent against the alleged-existence of invisible pathogens, complicated things even further for physicians. Though his first publications advocating for sterility were written in 1867, sterility was not widely adopted in medicine until nearly an entire generation later (Gwande). The tragedy of this was that, at the time of Lister's invention of aseptic technique, nearly half of all patients after an operation succumbed to deadly bouts of sepsis (infection) (Fitzharris 17). Infection in wounds resulting from contamination at the hands of physicians was so common, that it was widely believed puss exuding from a wound was a part of the natural healing process (Fitzharris 5).

Had sterility been widely adopted at the time of its inception, not only would hundreds of thousands of preventable deaths have been averted, but there likely would also be a greater ripple effect on modern medicine, where today we would have technological advancements that are currently unattainable. As foreign as it may be for us, it is important to comprehend the sheer normalization of infection until around the early 1900s, as up to that point it was the number one reason for post-surgical mortality (Bhattacharya). This insidious, common, and preventable surgical complication had a large role in instilling danger and fear in the public schema of surgery, as infection was widely understood by patients and physicians alike to be a natural and unavoidable result of operating. The entanglement of the two entities has not fully been able to be undone despite the mass advancements in medical science and surgical technology with which society is endowed today.

The second measure of surgical reformation that has impacted the safety of surgery in the modern-day United States was the invention of general anesthesia, and its incorporation into the operating room. During the late 1800's at Massachusetts General Hospital, a new ether-based gas administered orally to patients transformed what was previously an excruciatingly traumatic experience (Hajar). Until the invention of anesthesia, operations were heavily dictated by one factor: speed (Fitzharris 10). To illustrate this prioritization of completing a quick operation rather than a quality operation, consider the role of the medical resident during an unanesthetized procedure. In today's operating rooms, especially at large teaching hospitals, it is not uncommon to find medical residents, doctors-in-training, assisting their attending physician on a surgical case. This was also common in the medicine of yesteryear, however the role of a

resident physician has changed dramatically due to the decreased demand to finish an operation as fast as possible.

Today, residents assist in the surgery from a technical standpoint, they are positioned across from the attending physician and are typically being taught by the attending throughout the procedure, in real time. They are being thoroughly trained with sufficient oversight by professionals to both execute quality patient care for the betterment of society, and advance the field by training younger doctors to carry the torch for the communities they serve. This is resultant, in part, by the fact that today during an operation, anesthesia has afforded healthcare providers the luxury of time. Until 1846, the primary task of a doctor-in-training during a surgical procedure was to help, as best they could, to restrain the patient (Cameron). After all, general anesthesia and the medically-induced coma had not yet been invented, and patients were forced to undergo their procedures either fully-conscious or inebriated, both of which often led to severe complications (Cameron). The operating room would have many assisting students, but unfortunately none of them would be learning much, or allocating sufficient focus to the nuances of the procedure at hand, due to their obligations to act as restraints. Anesthesia transformed the medical operation from being a function of speed, to becoming a function of results.

Even though anesthesia, unlike aseptic technique, was universally adopted and widely implemented soon after its discovery, it is important to understand the pervasiveness that the clinically-administered terror of unanesthetized operations has had on the legacy of surgery within our society. For thousands of years, a diagnosis of a condition for which surgery was required was either a death sentence, given the

tragically-high mortality rates following procedures, or the one of the most unpleasant experiences a human being could endure, as being operated upon without anesthesia provides a constant administration of searing pain. Not to mention, patients who would be lucky enough to survive their procedures would still not emerge from the experience totally unscathed, as they would still have the infection-prone recovery to endure. In her book *The Butchering Art: Joseph Lister's Quest to Transform the Grisly World of Victorian Medicine*, medical historian Lindsay Fitzharris includes several anecdotes from patients who have undergone surgical procedures during the Victorian era. The average example goes something like this:

On one occasion, Liston's patient, who had come in to have a bladder stone removed, ran from the room in terror and locked himself in the lavatory before the procedure could begin. Liston, hot on his heels, broke the door down and dragged the screaming patient back to the operating room. There, he bound the man fast before passing a curved metal tube up the patient's penis and into the bladder. He then slid a finger into the man's rectum, feeling for the stone. Once Liston had located it, his assistant removed the metal tube and replaced it with a wooden staff, which acted as a guide so the surgeon wouldn't fatally rupture the patient's rectum or intestines as he began cutting deep into the bladder. Once the staff was in place, Liston cut diagonally through the fibrous muscle of the scrotum until he reached the wooden staff. Next, he used the probe to widen the hole, ripping open the prostate gland in the process. At this point he removed the wooden staff and used forceps to extract the

stone from the bladder. Liston- who reportedly had the fastest knife in the West End- achieved all this in just under sixty seconds (12).

Also of note is the case of 12-year-old Henry Pace, who Fitzharris highlights in her book. After being diagnosed with tubercular swelling of his right knee, Pace was told he would need to undergo an amputation of his leg to save his life. Pace was brought into an operating room, blindfolded, and immediately restrained by his surgeon's assistants. The 12-year-old counted six movements of the surgeons saw until his leg fell off (11). Pace went on to remember the story for 60 years, even recounting it to medical students at University College London, the same hospital where the operation initially occurred (11).

Pace's situation highlights a particularly poignant principle. Patients who survived these incredibly brutal ordeals would walk away with tales of the horror which they endured at the hands of medical professionals when describing the operation, with the fierce imagery of being restrained by multiple men, on an uncomfortable surface, while one of them cut into their flesh. With a vivid experience such as a wide-awake bladder stone removal, or an unsedated leg amputation, one does not have to work hard to make sure that the person to whom the story is being told will remember it. From anecdotes of those few patients lucky enough to have a good outcome, the larger consciousness society held knew that surgery was excruciatingly painful, and highly dangerous.

Today, surgery can still be described as painful, given the sometimes physically-restricting recoveries that occur while incisions heal, the side effects of general anesthesia wear off, and typical-post surgical complications like bleeding and infection are dealt with. Surgery today can also be described as dangerous, since during some surgical

procedures, there are many complex factors depending on the nature of the operation and the health of the individual patient, and there are a lot of variables that can go awry during a procedure. There are, sometimes, completely healthy patients who end up in much worse condition due to unfavorable side effects resulting from a procedure, these patients are nicknamed “flogs” by medical professionals (Gwande 22). For example, in a two-decade long study of perioperative mortality, appendectomy patients in Finland revealed that even with a routinely performed procedure such as an appendectomy, complications can still arise that are unrelated to negative appendectomies and complicated appendicitis (Kotaluto). But, one must attempt to understand, that while surgery may be described today as highly dangerous and excruciatingly painful, it is a far superior alternative to the medical intervention of the past. The operations being performed today are a completely different entity from the proceeding operations of the pre-sterility and pre-anesthesia procedures. Those conditions that, once upon a time, laid the groundwork for what has garnered the media representation to constitute what we think of as surgery.

While being an innovation that improved the safety of operations, almost universally, anesthesia also did something else to a patient’s perception of surgery. The stride in patient experience was coupled with a small social casualty, general anesthesia during operations effectively has left patients out of the surgical experience. While before, patients spent their time in the operating room violently thrashing and enduring searing pain, they were still active participants, able to take in the realities of the circumstances surrounding their surgery, including the environment.

After the invention and widespread implementation of general anesthesia during surgery, the ability to perceive the realities of what really happens in an operating room was taken away from patients whose experience were that of the general public, and reserved exclusively for medical professionals. This was for the best, as not having patients conscious during operations is both better for the patients and the clinicians. Under heavy sedation, the operative pain patients are subjected to endure is marginal, and it also allows the medical professionals to better focus on the cases at hand by taking more time, and affords them the opportunity to successfully teach younger physicians assigned to their service. Yet still, we can both advocate and educate on the incredible power of general anesthesia, and its overwhelmingly-positive impact on mankind, while also acknowledging the small byproduct of having patients be unconscious while they are operated upon. The byproduct, in this scenario, is a dearth of transparency with respect to what happens after patients are sedated. The ability to discriminate reality from distortion was taken away from the masses with the integration of anesthesia into the operative experience, and the realities of surgery became endowed with an esoteric aura understood by only physicians, nurses, surgical technicians, and students. Today, this knowledge of what surgery is really like still lies within the hands of these professions who witness it in its unobstructed form.

Largely, the surgery of today is safe. Physicians and other practitioners take their time and are methodical during operations, there are global practices that are standardized across countries to minimizing contamination, sedation has been perfected and is successful at minimizing pain and maximizing outcomes. There is an established, and highly meritocratic, infrastructure of medical education that ensures health professionals

are trained to truly do no harm. Still to some, surgery is surrounded by an aura of cautiousness, mystery, and even danger. In 2016, a cross-sectional study found the majority of patients who were observed before undergoing operations experienced a fear of anesthesia (Ruhaiyem). A 2018 study by the European Journal of Medical Research concluded preoperative anxieties is one of the most important problems prospective surgical candidates face, and can result in a greater intensity of postoperative pain (Celik). Further, preoperative anxiety in patients at some hospitals was recorded in a 2019 institution-based cross-sectional study to be as high as 47% (Bedaso). It appears that for many people, the numerous improvements that have been made in the last 150 years did not have the power to permeate into altering the public perception of surgery, which had been cemented by hundreds of years of first-hand recklessness and anecdotal terror.

This perception of surgery manifests itself in the semiotics of how operating rooms are represented in television medical drama, which for the purposes of this thesis can be defined as any primetime-network doctor series. In order to dive into the specifics of the symbols that are used to convey and capitalize upon the preconceived preoperative anxiety many patients face, a basic understanding of United States television medical drama should be understood to illustrate the magnitude of the current television medical drama industry, as well as the extensive popular culture legacy the genre has garnered in the United States over the past nearly 70 years. In the decade following the end of World War II, television rapidly surpassed radio as the most popular in-home entertainment system, and with this eruption of newfound viewers, there was a large amount of television programming being produced by networks (Walker). Among this explosion of

programming in the 1950s, were several distinct medical dramas that accrued popularity quite quickly.

Widely hailed as the first television medical drama, in 1951 CBS produced *City Hospital*. The show did not thrive, ending after only two years with relatively-low traction with respect to viewership. However, the 1954 NBC series *Medic!* made a unique connection with audiences, and accrued a substantive volume of both praise from television critics and criticism from medical professionals. Some, such as Joseph Turow, a communications professor at the University of Pennsylvania and a leading scholar on television medical drama, believe *Medic*'s short-term success with audiences was due in part to its aggressive marketing campaign, and branding itself as incredibly authentic, remarking that the show has "no compromise with truth" in how it fares to the realities of medicine (Turow 44). The program's success showed that viewers wanted to feel as though they were watching a program that was authentic, what they perceived to be as medicine in its unaltered form, even though the show was not as true to its source material as it advertised itself to be. Also produced that decade with varying degrees of success were the television shows *Diagnosis: Unknown* (1959), *The Doctor* (1952-53), *The Donna Reed Show* (1958-66), *Hennesey* (1959-62), and *King's Row* (1955-56) (Turow 399).

In the 1960s, modeled after the success of *Medic*'s pseudo-authentic depiction of medicine, there were 11 pieces of primetime network-doctor series produced, 10 of which were classified as dramas. The most notable was NBC's *Dr. Kildare* (1961-66), which was an extension of the character of Dr. James Kildare, who was created in the 1930s as a part of a short story, and debuted on screen in the film *Internes Can't Take Money*

(Turow 18). The Kildare character was prolific throughout his time, being afforded 15 films, two television series, seven books, and many addition mediums that garnered the character ancillary fame (Turow 18). Kildare is significant for many reasons, but primarily because he establishes the character archetype of the tall, conventionally-attractive, intelligent, white, cis-gendered, heterosexual, male physician that still exists within some pieces of medical drama of today.

In the decade that followed, the number of primetime network-doctor series on television nearly doubled to a whopping 23 shows, 8 of them comedies. This era is defined by one show that rises above, and acts as a heavy source of inspiration for its peers. CBS's 1972-1983 run of *M*A*S*H* took audiences by storm, and became a widespread classic. Its integration of comedic elements as well as conventional drama resonated well with a wide spectrum of viewership, and became the catalyst for the proliferation of medical comedy throughout the 1970s. Another noteworthy feature of *M*A*S*H* was its rejection of the Kildare model of how doctors were to be portrayed, depicting physicians as individuals who were smart, but not to the extent of being overly-brilliant. These new character archetypes enticed audiences and critics alike. Turow claims *M*A*S*H* was influential in an addition way with respect to how the public sees medicine. In his book, *Playing Doctor*, Turow writes that in *M*A*S*H*, the “deteriorating facilities and the scarcity of basic supplies were key elements in a storytelling frame which saw doctors bravely flailing against an onslaught of problems that hindered their sanity and their practice of good medicine” (Turow 288). He also goes on to advocate that *M*A*S*H* induced a significant conformational shift in how the public perceives doctors, notably that the issues of medicine were not resultant of system-wide

shortcomings; but rather, the issues were because of the individual health professionals involved. The operating rooms depicted on CBS's *M*A*S*H* are also significant, because while they sometimes incorporate some of the traditional lighting, noises, and dialogue found in its contemporaries, there is a high degree of variance throughout the eleven year run of the show in its depiction of surgery.

The 80's and 90's led to a similar volume of produced medical dramas, most notably the shows of ABC's *Doogie Howser M.D.* (1989-1993) and NBC's *ER* (1994-2009). Both of these shows, in addition to their rampant popularity and popular culture legacy, highlight the extensive breadth of the genre. In *Doogie Howser M.D.*, a young Neil Patrick Harris plays a charismatic 14-year-old physician, and in *ER* there is a constant stream of dramatic intensity. One might assume given this information that the medical drama produced in the ensuing decade would be of similar volume with a few high-caliber stand out programs. Oddly enough, the 2000s decade led to 49 separate primetime-network doctor programs, more than the past two decades combined. Among the many very noteworthy productions produced in this era are FOX's *House*, NBC's *Scrubs*, and ABC's *Grey's Anatomy*.

Through this timeline it can be seen that initially in the 1950s, audiences wanted what they perceived to be authentic medical content, even though it was far from it, coupled with an idealized depiction of physicians. Eventually, this mold devolved into relatable physician characters performing in a wide variety of medical shows, including comedies, dramas, and hybrid shows. While this progression does accentuate the differences that each generation of television shows adopted, paradoxically it also

highlights the commonalities of United States medical drama throughout its tenure on television.

A key point that Turow mentions is that while medicine has evolved substantially over the last 70 years, medical drama has not. There is a skeletal framework that is common throughout many of the programs previously mentioned. Certain commonalities include near-identical hospital settings, a stringent hierarchy of doctors, nurses, and orderlies, most of the clinical issues encountered are acute and can be cured easily, and that television doctors almost always have the right resources to heal their patients (Turow 2). A supplemental commonality that can be added to this list, is the near ubiquitous distortion of operating spaces present with televised medical dramas throughout the ages.

Chapter Two: The Reality of an Operating Room and its Television Counterpart

Figure 1 depicts a specific scene from season six, episode 11 of *Grey's Anatomy* entitled “Blink.” The visual, though specific to one episode of one piece of medical drama, actually encapsulates themes, sentiments and symbols from across all realms of modern, and past, medical drama on United States television. These symbols include the thinly dispersed lighting present within a television operating theatre, the terse and homogeneous dialogue among health practitioners that occurs during surgery such as “clamp” and “B.P. tanking,” and the external and auxiliary noise within an operating room during a surgical procedure, such as a beeping heart-rate monitor (00:29:32-00:30:29). These are symbols that originated in Sidney Kingsley’s 1933 production of *Men in White*.



Fig. 1. Christina’s Solo Surgery. “Blink.” *Grey’s Anatomy*, Season 6, written by Shonda Rhimes and Debora Cahn, directed by Randy Zisk, American Broadcasting Company, 2010.

Referring to figure 1, or almost any other scene from a piece of medical drama depicting surgery, an individual with minimal exposure to the medical field would not

immediately see the inaccuracies present in the scene. Even further, certain individuals who work within the realms of healthcare that are unrelated to surgery may also fail to notice these distortions, despite working in the field of medicine. Nonetheless, to those familiar with the reality of an operating room's landscape, the inaccuracies are apparent; and, their failure to be immediately recognized is evidence of the pervasiveness that 70 years of film, television, and theatrical misrepresentation has had on how certain members of the public perceive surgery.

As a rising medical student who has been in over 30 different operating rooms, and scrubbed in on and observed over 50 surgical procedures, I can attest that this revelation was initially very jarring for me. When I first stepped inside an operating room to observe a surgical procedure for the first time, I was confused by the actual amount of light present within the confines of the operating theater and had a, somewhat embarrassing, experience. The procedure was a left ankle syndesmotomic repair. I arrived at the operating room early and patiently waited for a long period of time in the blinding glow of the room, thinking that the lights would eventually be dimmed, and then the surgery would begin. I was shocked to find out that while I was not paying attention and waiting for the lights to go down, the orthopedic surgeon had already completed a quarter of the the procedure, as the surgery was in progress the whole time. Until that moment, the closest I had come to an actual surgery was observing one through the lens of television shows like *Grey's Anatomy* or *Scrubs*.

The reality of the brightness in an operating room makes perfect sense, in that surgeons and hospital architects would engineer the room be well lit, so the healthcare professionals can better see the patients on whom they are operating. According to the

International Electrotechnical Commission (IEC), the world's preeminent standards organization that issues electrotechnical guidelines for operating rooms all over the world, an operating cavity in a standard surgical operating room should be illuminated by a range able to span from 40,000 to 160,000 lux (IEC 2-41). This is a measure of how much light, per square meter, should be able to fall on the surface it illuminates. For reference, a light with an illuminance of 40,000 lux in an operating room has an extremely high intensity, and produces an aura of brightness that practically bathes the room in light. For reference, please see figure 2 and figure 3, which provide a more accurate depiction of operating room lighting. However, individuals who are only exposed to the schema of the dark-dramatized operating room depicted in television medical drama and medical comedy are unable to become aware of the large disconnect between what is factual, and what is fabricated.



Fig 2. Reading Healthplex Operating Room, 2016, Ballinger Architecture, Halkin Mason Photography, <http://www.ballinger.com/tag/reading-health-system/>



Fig 3. *Cardiologists and surgeons work side-by-side*, 2010, Tulane Medical Center,

https://www2.tulane.edu/news/newwave/021010_pediatric_center.cfm?RenderForPrint=1

Another medical misconception sown from within the writers' rooms of Hollywood and broadcast to the public through television is the allocation of focus devoted to a surgical procedure during an operation. In medical drama and medical comedy, during the execution of a surgical operation, the overarching tone within the operating theater is commonly a very serious and intense undertone. For example, the season 3 finale of ABC's *The Good Doctor* includes a dramatically intense vascular rupture repair with only two medical professionals when the procedure calls for three (00:01:12-00:01:24). Season 1 episode 13 of NBC's *Chicago Med* involves a suturing a bowel that has been perforated after the patient has swallowed magnets, and the actors focus to the exposed bowel is unwavering throughout the sequence (00:00:01-00:01:30). The actors playing surgeons shout directive orders such as "Debakey forceps" at others in the room, seldomly and sparingly averting their gaze from the incision and entrails that lie in front of them. For the duration of the operative sequence in these episodes and

many others, this is the tone present, and this is how surgery is represented to the public at large because it achieves a more dramatic aesthetic.

In reality, though operations can demand this type of sustained focus from healthcare practitioners depending on the nature of the procedure and comorbidities of the patient, they do not always. The tone present in an operating room during a typical-routine surgery rarely demands the type of televised stereotypical seriousness and dramatic devotion depicted on television. Often with procedures, especially common ones, the lead surgeons have performed the surgery so many times that it is merely a repetition of muscle memory movements. This pattern for them becomes an instinctive, ritual like, practice of going through the motions of a particular procedure, and demands minimal exerted conscious effort. In an interview with the Huffington Post, Dr. David Light, a head and neck surgical oncologist said the following:

People tend to think the operating room is a quiet and serene place; depending on the surgeon who is technically in control (not the anesthesiologist), it might be totally the opposite. In my OR I have music playing. We talk constantly about "stuff," not necessarily about the procedure. If the surgery is long but "routine" (and many of mine are), we tend to not even notice the time flying by (Light).

The focus and energy surgeons fixate on a patient during an operation is not concentrated to nearly the extent Hollywood studios would like you to believe.

In an interview with Kathleen Henry, a nurse with over 25 years of experience who has spent much of her career in operating rooms and recovery units, she revealed that the collegial climate among healthcare professionals during a surgical operation is not typically one of sustained seriousness and high intensity, it is more akin to the schema

of how one would envision “water-cooler talk” in an office setting (Henry). The conversation is, for the majority of a procedure, free-flowing among the practitioners, and often is unrelated to medicine. This can include talking about “weekend plans, sports, politics, children and spouses, television, and just about anything else” (Henry). Kathleen assures that if an unforeseen complication arises during a surgery, then a serious reallocation of focus from all parties in the operating room ensues; but, the majority of the time surgeons, scrub nurses, surgical technicians, drug representatives, and anyone else present in the room are going through the motions and steps of a procedure that they do routinely (Henry). They do not deny the patient in front of them the unwavering fixation and focus represented in television out of laziness or disdain, but rather, because that stereotype is wholly unnecessary and utterly unrealistic.

A unique, and sometimes surprising, hallmark of surgical settings is the auxiliary noise produced in an operating room during a surgery. Television medical drama representation would have a layman believe that the operating room is, for the most part, completely quiet with the exception of the mechanical beeping of medical devices, such as a heart rate monitor or an anesthesia work station. However during most operations, background music playing from a Bluetooth speaker or over the room’s microphone system is abundantly common. A recent study by the British Medical Journal found that music is played during operations roughly 62-72 percent of the time, and the playlist is almost always chosen by the lead surgeon (Bosanquet). When one envisions having their gallbladder removed, they seldom envision it being done to the tune of smooth jazz, or a heavy metal rock band. Sometimes, surgeons, nurses, surgical technicians and members of the operating team will bring their personal music playing devices to the operating

room, and plug them in by the non-sterile workstation in the operating room. This is in stark contrast to depictions in medical drama of both stage and screen, where the room is kept completely silent, with the exception of medical devices making ominous technological noises. Some people may find this information to be superficially irresponsible and cognitively jarring, due to the dissonance that it creates with what consumers of television medical drama imagine the surgical experience to be, after they are sedated.

The lighting, dialogue, and noise levels depicted in operating room scenes over the years in television, film, and theater have been, in some situations, incredibly untrue to their source material. As previously mentioned, lighting is required to range from 40,000 lux to 160,000 lux in contemporary operating rooms, with limited and rare exceptions to this rule. Exceptions may include laparoscopic, or robotically-assisted minimally invasive procedures, in which lights must be dimmed to better observe the screens through which the practitioners are viewing the operating cavity.

In every hospital operating room, procedural room, private practice operating room, and outpatient surgical center, an abundance of lighting is essential and is integral to a successful outcome. Lighting in medical drama operating rooms is intentionally sparse. It conjures an aura of darkness with only selectively lit aspects of the room. The director, set designer, or editor is making intentional decisions to depict the room to elicit a particular feeling of focus & unease from the audience and its spectrum of viewers. Conversations in real operating rooms vary depending on practitioner, but seldomly is there complete silence for the entire procedure (Henry). These conversations that ensue during a surgery range from small comments, to free flowing conversation regarding non-

medically related topics including family, hobbies, vacations, and others. In medical drama there exists a near-homogenous style of dialogue in medical drama operating rooms that is terse, and stress-inducing, while the practitioners exert immense focus on the operation at hand. This writing style is implemented in constructing operating room scenes, in part, to augment the story-arc and enhance the scenes with intensity the story would otherwise lack.

This distortion of the venue of an operating room and what happens after a patient is rendered unconscious, further widens and deepens the divide in understanding the reality of surgery compared to its television counterpart for members of the public who do not work in healthcare. Televised depictions of operating rooms are manipulated for the intent of better crafting a narrative that will better elicit focus and captivation from members of its target audience. These misrepresentations of darkened lighting, allocation of focus, and auxiliary noise found during a surgical procedure create a number of issues for members of the general public, including issues surrounding properly consenting to operations, and patient-centered decision making within an individual's medical treatment. If a patient is not correctly envisioning their surgery when they sign their informed consent paperwork to undergo the procedure, it can be argued that they do not truly understand that to which they are consenting.

Since the 1984, after the publication of *The Silent World of Doctor and Patient* by physician and ethicist Dr. Jay Katz, the doctor-patient relationship has been drastically altered with respect to shared decision making in the United States (Wadlington). It is widely taught in modern-medical education that the role of the physician is to outline the different treatment options a patient can choose, accentuating the associated risks and

benefits, and ultimately letting the patient choose which course of treatment aligns with their individual values. This is in stark contrast to the physicians of the golden age of medicine during the first half of the 20th century, who would have absolute authority over a patient's treatment plan, no matter how much it conflicted with a patients' preferences (Katz 48). The fact that patients are at the center of decision making is ideal, as different patients with the same prognosis may have different values, and desires for what they want their physician to provide for them. For example, two patients with a serious disease, such as stage two pancreatic cancer, may be provided the options of a triad of surgery, chemotherapy, and radiation, or, six-months of hospice care. Different patients will choose differently, regardless of medical advice, to choose the treatment plan that best aligns with their own values. The silver lining to patient centered decision making is that patients need to be sufficiently-informed in order to successfully make decisions that best align with their personal desired outcome.

The misrepresentation of surgery in mass media invokes many issues surrounding patient centered decision making. Consider the following scenario: a patient is given two options to treat a disorder, one treatment option is an aggressive drug therapy with many side effects, and the other is a routine surgery with a one-week hospital recovery time. In this scenario, the patient chooses to undergo the surgery. If the patient in this situation is envisioning a dark, silent room where the practitioner will provide them with what they imagine to be, unparalleled amounts of concentration and focus over every incision, resection, and suture of their procedure, the patient was not provided with all of the facts necessary to make an informed decision about something that could impact their entire life. The patient may have chosen differently if they were endowed with actual

knowledge of what surgery is like, rather than mere societal misconceptions portrayed on television medical drama.

Greater transparency at the hands of healthcare providers is essential for patient centered decision making to be most effective, and giving patients the tools to properly consent to the medical treatment they undergo. However, there is a major flaw in this line of thinking. Providers are not attempting to disguise or mask what they do in the operating room. Surgical misperceptions and the widespread misunderstandings of surgery are far more resultant of the massive popular cultural cannon that the genre of medical drama has cemented into the general public's consciousness through decades of inaccurate stage, screen and television portrayals. The origin of the dramatization of surgery and the influence that it has on the social perceptions of surgical settings is of utmost importance, since it provides insights into the greater misperceptions of medicine that society still holds today.

Chapter Three: *Men in White*, The Patient Zero of Operating Room Distortions

Up to this point, the scope of this discussion has been predominantly centered on television medical drama, which for the past 70 years has been the main outlet for reinforcing specific symbols within our public consciousness that are not entirely truthful to the reality of what an operating room looks like. These symbols include a parsimonious incorporation of lighting, heightened auxiliary noise stemming from machinery, and terse dialogue typically in the form of directions. However, while the misperception of a quiet, dimly-lit room with short-spoken surgeons commanding orders has today manifested itself as a motif throughout television medical drama, its origin appears to lie within a different medium of entertainment entirely.

While the cannon of television medical drama & medical comedy has today become quite expansive, the genre of theatrical and early film medical drama is relatively smaller and easier to observe (Turow 33-34). Though there are plays from the 1900s, and preceding it, that include physician characters and hospital settings, such as 1932's *The Late Christopher Bean* by Sidney Howard, or *Arrowsmith* also by Sidney Howard in 1931, these scripts lack the setting of a formalized operating room, or the specific elements of dimmed lighting, technological auxiliary noise, and terse dialogue (Housman). Looking back and analyzing the existing pieces of theatrical and early silver screen medical drama for operating room sequences, there is one piece which predates every prime-time network doctor series, and incorporates the themes, sights, and symbols found in medical drama operating rooms today.

Sidney Kingsley's 1933 production of *Men in White*, performed by the famous Group Theatre and directed by Lee Strasberg, is a play acclaimed by many to be the first hospital-based medical drama (The British Medical Journal). Its popularity is proved by both the volume of patrons who saw it live, and its reception in critical circles. The production opened on September 26th, 1933 and ran for 351 performances at the Broadhurst Theatre on West 44th street in New York City, and won the 1934 Pulitzer Prize for Drama, an incredibly high honor (Morphos 2). One of the most iconic scenes in the play involves two surgeons performing the surgical scrub, and heading to the St. George's hospital operating room to perform an emergency surgery. The scene is the first recorded incorporation of these symbols, and is the production where the modern distortion of the operating room has its roots.

An analysis of a collection of Kingsley's plays titled *Sidney Kingsley's Five Prizewinning Plays* revealed much about the inspiration for *Men in White*. Each play in the anthology includes a preface written by Kingsley at age 80, reflecting on his work near the end of his life. In the preface to *Men in White*, Kingsley revealed some deeply personal facts, as well as from where the inspiration for *Men in White*, originally titled *Crisis*, came. Kingsley states how he was always very fascinated with the history of medicine, and perhaps himself would have been a doctor "if the times were different" (Kingsley 5). One of Kingsley's early acquaintances was an intern, the equivalent of a first-year resident, at Beth Israel Hospital in New York City. Kingsley recalls that he would often visit his intern friend at the hospital, occasionally donning a white coat and going on morning rounds with him (Kingsley 5). Some critics such as Evangeline Morphos claim that Kingsley's observation of real surgeries and medical procedures

enhanced his ability to achieve heightened realism in portions of *Men in White* (Morphos 2).

The soon-to-be playwright describes one day at the hospital, when he was desperately searching for a source of inspiration to write his upcoming play. Later that same day, he for the very first time, witnessed the surgical scrub proceeding an operation, and vividly recounts:

There in the operating room were groups of men and women being helped into white masks and caps and gowns in a ritualistic, rhythmic pattern, against a surreal background lit by a great saucer of lights overhead, composing a ballet. Even more, this ballet was a demonstration of the history of surgery. What more could a playwright ask? (Kingsley 5)

Kingsley was indeed familiar with the amount of light present in the operating room of an actual hospital.

In the critically acclaimed operating room scene in *Men in White*, Kingsley includes one and a half pages of sheer stage direction outlining the surgical scrub in meticulous detail (Kingsley 61).

There is one STERILE NURSE, wearing cap and gown, mask and long rubber gloves; there are two UNSTERILE NURSES, similarly clothed but wearing no gloves. They move to and fro like so many pistons, efficiently, quickly, quietly-ghostlike automata.

In the right-hand corner nearest us, stands a row of half a dozen sinks, the faucets in them turned on and off by means of knee-stirrups attached underneath. Above, a shelf holds cans of sterile brushes, pans of liquid

soap, and eight-minute glasses-one to each sink. Well apart from these sinks, and to the right, are two basins in a white-enamel stand; one contains blue bichloride, the other alcohol. Beyond them again stands a foot-pedal gown drum, scarred from its purifying baths of steam.

To the left is a long glove table, on which are the gloves wrapped in canvas "books," sterile powder can, and towels covered by a sterile sheet.

WREN, in cap and mask, is dipping his hands in the bichloride pan; PETE, at the washbasin, is cleaning his nails with an orange-stick, and MICHAEL-SON is scrubbing his hands with long, easy, rhythmic strokes of the brush. They are chatting quietly.

The STERILE NURSE goes to the glove table and folds over the sheet, uncovering the glove books, etc.

A NURSE comes from the sterilizing room, carrying a steaming tray of instruments to the instrument table at the foot of the operating table. The STERILE NURSE returns to the instrument table, and there is a clink of instruments as she arranges them.

WREN holds up his hands so that the bichloride rolls down the forearm and off the elbow; he repeats this once more in the bichloride, and twice in the alcohol pan, then walks away, holding his dripping hands high and away from him.

A STERILE NURSE gives him a sterile towel. He dries his hands, using the separate sides and ends of the towel for each hand, then he tosses the towel to the floor, and crosses to the glove table.

An UNSTERILE NURSE quickly crosses, picks up the towel, and takes it away. WREN powders his hands, opens a glove book, gingerly plucks out a glove, handling it by the cuff, careful not to touch the outside of the glove, as that might still soil it (since the hands themselves can never be completely sterilized) and slips it on. The second glove he slips on, careful not to touch his wrist with his already gloved hand. He then snaps the gloves over the cuffs of his jacket, wraps a sterile towel about his hands and walks over to the operating table.

PETE finishes scrubbing, goes to the bichloride basin, and dips his hands, using the same technique as WREN. When he is through with the alcohol, however, he turns to the gown drum. The STERILE NURSE crosses to the drum, steps on the pedal, which raises the lid, and deftly extracts a folded gown, without touching the drum itself. She releases her foot, and the lid clunks back. She hands the folded gown to him; he takes a corner of it, unrolls it, and slips into it. An UNSTERILE NURSE comes up behind, careful not to touch him, and ties the gown for him.

The whole effect is that of a smooth, well-oiled machine, a routine so studied that the people in the operating room can afford to be casual-as they are.

One of the UNSTERILE NURSES enters with LAURA, whom she has just helped into a cap and gown. (Kingsley 61- 62)

During this compulsive stage direction, he sets aside two sentences to describe the actual setting, rather than the stage direction. Kingsley writes “The operating room. A

feeling of sharp, white, gleaming cleanliness! Back center, the huge, hanging, kettle drum lamp, with its hundreds of reflecting mirrors, throws a brilliant, shadow less light on the chromium operating table” (Kingsley 60). The scene ends with the head surgeon, Dr. Hochberg shouting “scalpel!” and all of the lights in the theater, except for the one directly above the operating table, dimming to completion. This affect leaves a sole light on stage which, to quote Kingsley’s stage direction, “bathes the tableau in a fierce, merciless, white brilliance” (Kingsley 65).

Early medical journals of the 1930s included more than just peer-reviewed articles. Medical job listings, notable deaths within the academic medical community, promotions of national medical leadership, and in this specific scenario, critical reviews of medical drama were also commonly found. The 1933, volume 101 of *JAMA: The Journal of American Medical Association* included an editorial by the journal staff on the original production of *Men in White*, which was gaining rapid popularity at the time. The play, as described by the medical professionals reviewing it in the Journal of the American Medical Association, was significant because it had the potential to bring “the presentation of medicine in the proper light to the people” (JAMA).

Another long-standing medical journal that contained information from the medical community on *Men in White* was the 1934, vol.224 edition of *The Lancet*. This review is more specific to the original production than its JAMA counterpart. *The Lancet* review claims that the “scene in the operating theater borders on the improbable” but that it “includes a striking exhibition of routine aseptic and antiseptic precautions” (The Lancet). *The Lancet* goes on to recount that the use of medical instruments, and the process of performing the surgical scrub in the operating room scene as “beyond

criticism” (The Lancet). Still, the review’s author said the operating room scene was improbable in its non-technical aspects, which is likely in reference to the dramatic content and other production elements, such as lighting and dialogue.

It is clear that the lighting affect and dramatic dialogue implemented in this scene was not out of ignorance toward what an actual operating room looked like, but rather for the incredible dramatic effect and production value it creates. The dialogue in this scene coupled with its lighting stage direction written in Kingsley’s 1933 production of *Men in White* has metastasized over generations of American culture, embedding itself deep within medical drama for the decades that ensued. The direction to have a sole light hanging above the patient, as well as the decision to have the surgeon aggressively shout “scalpel” in the midst of a pitch-black room has had an impact on many people’s perception of the operating room, and what the procedure of surgery is actually like.

Many aspects of the theatrical 1933 Group Theatre production of *Men In White* ended up translating to the film version of the same name which was produced in 1934. The film was wildly successful, even by today’s standards. The film earned MGM studios a profit of \$784,000, which is approximately \$15 million dollars today. The movie version of *Men In White* is just as significant in tracing the lineage of shadowed operating room lighting, auxiliary technological noise, and terse dialogue because it transposes many of Kingsley’s operating room symbols onto the screen for the first time.

The full black and white movie version of *Men in White* is an hour and 13 minutes in length, and plot wise, it is very true to the play upon which it is based, with minor alterations. The movie centers on medical intern Dr. George Ferguson, played by famous actor Clark Gable, as he oscillates between finding fulfillment in his career as a physician

serving humanity and dedicating time to his loving fiancé, and wealthy socialite, Laura Hudson, played by famous actress Myrna Loy (*Men in White*). One scene in this film that is particularly relevant arises when Dr. Ferguson, has an affair with nursing student Barbara Dennin, played by Elizabeth Allen, at the hospital while Dr. Ferguson is on call one night. Later in the film, it is revealed that the nursing student with whom Dr. Ferguson had the affair needs to undergo an emergency surgery, after she has undergone what is implied to be a botched abortion (00:47:29).

The reason why it is just an implied abortion is because the original overtness of the aborted pregnancy in the script, though never explicitly stated, was found to be in violation of the Motion Picture Production Code, and caused controversy among the 1930's public audience even before the film was formally released (Kirby). Accordingly, the final cut of the film was altered by MGM to make the film more palatable, and less controversial (Kirby). Nevertheless, it was still condemned by members of the public, including the newly formed Legion of Decency (Kirby). This famous operating room scene in which Drs. Ferguson and Hochberg are rushed into emergency surgery to operate on Barbara, begins at 00:49:59 and ends at 00:55:39 within the film. Though the operating room scene depicting Barbara's emergency surgery only lasts for about five and a half minutes, and shows no gore or blood, the sequence is packed with the iconic operating room symbols originated in the play of the same name.

The most major difference between the operating room scene in the 1934 film and the operating room scene in the original 1933 play is that the film opts for an older academic operating "theatre" with built in seating above arranged in a circular formation where spectators can view the ensuing procedure. The theatrical version incorporates a

standard one-story room with no open ceiling. The architecture of the operating room is revealed at 00:52:48 in the film, through a camera angle in which the shot is taken from the top of the operating theatre as shown in figure 4.



Fig. 4. Operating Theatre. *Men in White*. Boleslawski, Richard. Metro-Goldwyn-Mayer Studios, 1934, film.

Though the movie version of *Men in White* uses only a grayscale tableau, the degree and dispersion of lighting in the operating room sequence is able to be reconstructed by examining the shadows present on the walls of the operating room, and the lighting equipment that is present within the room itself. There are two frames within the sequence that include an external operating room lamp, one such frame is found at 00:54:03, figure 5, and another is located at 00:55:52, figure 6, within the film. Upon examining figure 5, one can observe that the wall to the back left side of the frame is unevenly bathed in light. This unevenness is made evident by the rhomboid pattern of light that emerges on the otherwise homogeneously dark surface of the wall. Also of note is the posterior view of the large external light in the center of the frame, which appears

to be at an angle such that it cannot be solely responsible for the rhomboid pattern of light on the wall.



Fig. 5 Posterior Lamp. *Men in White*. Boleslawski, Richard. Metro-Goldwyn-Mayer Studios, 1934, film.



Fig. 6 Anterior Lamp. *Men in White*. Boleslawski, Richard. Metro-Goldwyn-Mayer Studios, 1934, film.

Additionally in this frame, though all characters are wearing identical white smocks, caps, and facemasks, they are not illuminated equally. The character positioned at the superior/cranial end of the operating table is more radiantly illuminated than the three members of the operating room staff who are positioned several feet to the left of the table, and the member of the operating room staff who is positioned adjacent to the

patient's right lower extremity. This uneven distribution of light in which the beams' concentration is highest at the superior region of the operating table, and becomes increasingly diffuse the farther it gets from the table, is consistent with the effect called upon by the stage direction in Kingsley's play (Kingsley 65).

In the top right corner of Figure 6, the previously examined external black light is viewed from its anterior surface, the side that emits light. Surprisingly, in the midst of the operation while Dr. Ferguson is having sweat dabbed from his brow, the brilliance of the light as viewed by the camera is not high as one might suspect. There is a brighter hue that can be seen within the internal-most rings of the dish, but it is not emitting a vibrant volume of light. Also significant in this frame is that the circular tube of light that surrounds the above spectators' circle is visible. In this scene there is a tube of light that surrounds the operating room, which can be seen in figure 7, at timestamp of 00:54:33, as Barbara is undergoing sedation, and figure 8, found at 00:55:19, below.

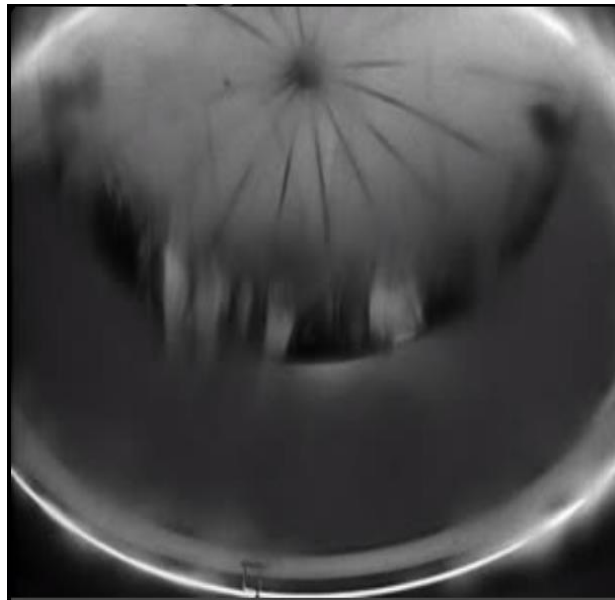


Fig. 7 Barbara's View Undergoing Sedation. *Men in White*. Boleslawski, Richard. Metro-Goldwyn-Mayer Studios, 1934, film.



Fig. 8, Dr. Hochberg Operating. *Men in White*. Boleslawski, Richard. Metro-Goldwyn-Mayer Studios, 1934, film.

The dialogue that the filmmakers interweave into the scene is terse and almost exclusively consists of commands. At 00:53:10, after Dr. Ferguson's gown becomes contaminated, he turns to the circulating nurse and promptly orders "nurse- sterile gown- quick." Dr. Ferguson does not employ the use of any superfluous language in his statement, but rather, he only utters the essential text so that the person with whom he is speaking can derive his intentions. Perhaps not the purpose, but certainly a consequence, of constructing dialogue in this manner is that it conveys that time within the interaction is of the essence, and employing this short sentence structure creates a greater sense of urgency for the characters involved. The stakes in the on-camera operating room are raised, and though it is never explicitly stated, assigning this type of dialogue reinforces this concept of urgency by conveying to the viewer that the characters involved do not have the luxury to say things like "nurse, would you please get me another sterile gown?"

Mine has just become contaminated” and instead, out of necessity, they must opt for language like “nurse- sterile gown- quick.”

Later on at 00:53:47, Dr. Hochberg tells Laura “Miss Hudson- put your mask on- stand right here.” Both excerpts of dialogue exemplify the very brief, and commanding sentence structure of which the scene’s dialogue consists. Also noteworthy of examination, is that the dialogue in this operating room sequence always is said by a higher-status character to a lower status character. A byproduct of having only unidirectional commands from the physicians in the room to the rest of the operating room staff, and spectators like Laura, reinforces the constructed hierarchy within the operating room. There are many more examples of the brief and commanding sentence structure as the scene goes on, such as when, during the actual procedure at 00:55:38, Dr. Hochberg orders the operating room staff to reorient the patient on the operating room table to a different position by simply exclaiming “Trendelenburg position” loudly. The most evident example of the deliberately brief and commanding dialogue in the operating room scene is the sequence of dialogue at 00:54:47 just before Dr. Hochberg makes his first incision, where he verifies his accompanying surgeons are ready to begin the procedure:

Dr. Hochberg: Dr. Wren?

Dr. Wren: Ready.

Dr. Hochberg: Dr. Ferguson?

Dr. Ferguson: Ready.

Dr. Hochberg [to nurse]: Scalpel.

Without using any verbal context, Dr. Hochberg successfully uses a single word, “scalpel,” to convey his complex intention of asking a scrub nurse to hand him a scalpel of appropriate sharpness to make an abdominal incision. This type of implemented character dialogue reinforces an underscoring sense of urgency, and sustains an overt hierarchy, within the setting of the operating room in this scene from the film *Men in White*.

When the physicians in the operating room are not employing their fleeting commands, the room is still not completely silent even though the characters have stopped talking. Within the scene, there are a plethora of auxiliary noises coming from the surgical technology within the operating room itself. Before the procedure formerly begins, at the timestamp of 00:54:26 Barbara dons a standard anesthesia mask hooked up to a large machine. The machine omits a rhythmic and artificial inhale and exhale as the actress playing Barbara is rapidly rendered unconscious by the gas. The audible-artificial inhale and exhale, however, does not subside with Barbara’s consciousness, it continues in the background of the rest of the operating room sequence, and can be heard prominently when the characters are not speaking. Similarly, interspersed throughout the scene, anytime a surgical tool is picked up, handed, or placed down, an audible clanging noise rings out such as at 00:55:10. Additionally, a period addition to the operating room in the 1934 version of *Men in White* is a cauldron of boiling water. The cauldron, in this context, is being used to sterilize surgical tools. Perhaps an exaggeration, but nevertheless an interesting effect, is that the bubbling of the cauldron is audible, especially when the nurse who is sterilizing the tools is present within the frame such as at 00:54:59.

Individually, the items and their corresponding sounds are theatrically innocuous and do not conjure any overtones, as they are realistic. But together in the context of the scene, they reflect something else. The ability to hear these items is also a reflection of the absence of superfluous dialogue and side conversations during the surgical procedure. It is indicative of the focus that the healthcare professionals are expending on the case, and the seriousness with which they regard the operation.

Conclusion

The depiction of operating rooms over the span of the last seventy years on prime-time network television drama in the United States has, in varying degrees, embodied the sentiments and symbols created by Kingsley in 1933. Incorporating a darkened lighting design to augment the theatricality of the space, integrating feverous technological noises to illustrate silence among practitioners, and infusing brief directive dialogue in operating room scenes to achieve a sense of underlying urgency, are all symbols used by directors, producers, set designers, and writers to achieve a more dramatized aesthetic in the setting of the operating room. These symbols also are implemented by those creating medical drama to illicit a greater sense of suspense from their viewing audience. Though surgery is not without its risks, and certainly has a long history of inflicting carnage onto patients in the United States and abroad, the overtone created by the televised contemporary operating room is not in accordance with the surgical advancements that have been made within the last 150 years. This topic is worthy of further research, as its pertinence is apparent in diffusing preoperative anxiety in patients whose apprehension stems from television medical drama portrayals of surgery, and because greater transparency about the reality of surgery endows patients who have never personally witnessed an operation with the ability to make more informed decisions regarding treatment.

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