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Placebo Controls, Exorcisms and the Devil

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In 1784, Benjamin Franklin and Antoine Lavoiser used the first ever placebo-controlled medical experiments to debunk the healing practices of mesmerism. Mesmer had developed his curative methods after investigating a notorious exorcist-priest and demonstrating that he could obtain similar results without appeals to Jesus. He claimed to have uncovered “animal magnetism,” a new “fluid,” analogous to gravitation. Invisible forces directed by the mesmerist at predominantly women patients would initiate a “crisis” that led to unusual bodily sensations, crying, fainting, uncontrolled gestures, fits or violent convulsions. After treatment and “crisis,” many experienced profound salubrious effects. Controversy ensued and Louis XVI appointed a royal commission. The dispute was not whether mesmeric magnetism could heal, but whether there was a genuine new physical force. Placebo-controlled experiments were undertaken; the scientific team administered bogus “mesmerized” objects or treatments or, in a crossover manner, secretly dispensed the genuine articles. If the patients reacted from a dummy exposure or did not react to the bona fide article, the claims could be discounted. For example, a patient who was very sensitive to the presence of “mesmerized” trees, passed out and needed to be carried out of the garden when he touch a tree he had been deceptively told was “treated.” Earlier, he was not affected when he touched a tree he had been secretly mesmerized beforehand. Other patients went into a crisis with plain water after being told it was mesmerized, but had no sensations from surreptitiously administered authentic “magnetic” water. The commission concluded that “this agent, this fluid has no existence” and any effects were due to “imagination.”

What is peculiar about the Franklin commission's report is that the placebo controls are introduced without any explanation, as if they were routine. The report does not mention that the direct inspiration for its methods came from Christian exorcism rites enacted two hundred years earlier. It was not necessary to state the obvious: readers of the report were familiar with placebo controls (or what were called “trick trials”) from the earlier celebrated devil controversies of the 16th century.

The basis for Reformation and Counter-Reformation exorcisms harkened back to the Gospels. Jesus of Nazareth stated: “in my name, shall they cast out devils.” (Mark 16.17) Despite being the “father of lies” (John 8.45), “the devils also believe and tremble” (James 2:19) and could be commanded to acquiesce and speak truth and be a reliable witness. Typically the devil recognized the authority of Jesus and acknowledged him to be the “Son of G-d most high.” (Matt 8:29, Mark 5:7, Luke 8:28) An iconographic example of exorcism is the possessed man in a synagogue who:

shrieks at the top of his voice... 'I know who you are—the Holy one of G-d.' Jesus rebukes him. "Be silent...and come out of him..." There the devil, after throwing the man in front of the people, left him. (Luke 4: 34-35)

During the violent collision of the early modern religious wars, most notable in France, this power to cast out the devil and his confederates became a persuasive tool for demonstrating apostolic authority. This was especially the case for Catholics who were more comfortable with miraculous displays. These Counter-Reformation exorcisms depended on the "common knowledge" that demons could not tolerate direct divine contact (e.g., holy water, consecrated wafer or readings from the Latin scriptures). Such exposures caused the demons to writhe in pain and flee with a consequent "cure" for the possession victim. Not surprisingly, Catholic priests would abjure devils to testify to their fondness of Protestants and fear of Rome.

Exorcisms could become colossal revival meetings performed on elevated platforms built inside or outside churches. Fervent religious processions, mass proselytizing, and collective confessing, singing and praying created a sacred ambiance. In bawdy relief, the possessed demoniacs provided entertainment with erotic ditties, lewd gestures, wild gyrations, hideous faces and wild shrieking animal roars. Breathtaking feats of physical prowess were exhibited in the violent wrestling between teams of strongmen and superhumanly invigorated demoniacs. Audiences could reach 20,000 and pamphlets further publicizing the exhibitions throughout Europe indicated the intense interest in these spectacles. Figure 1 shows a priest administering sacramental wine to a contorted demoniac, held down by two men, as the devil, represented by a squirming dark animal, escapes. Such purification rites usually had to be repeated on a regular, even daily, basis.

Exorcisms were not without controversy. Much of the Catholic hierarchy was worried that charismatic exorcisms were opening the church to uncontrolled folk practices. The mostly Catholic supporters of the rites countered that these campaigns of dispossession demonstrated the Church as the legitimate inheritor of Jesus' authority. Protestants, who generally had an anti-magical critique of Catholicism, were suspicious and easily discounted these superstitious events (even if they sometimes performed the rite in more subdued form with prayer and fasting). Some argued that possessed victims (who were overwhelming women) probably had severe illnesses, were coerced by zealot preachers or simply gave false testimony.

The "trick trial" was developed in response to this suspicion, doubt and skepticism. The most prominent and emblematic such trial occurred in 1599, in a small town in the Loire Valley of France. A high stake political struggle set the stage and explains its documentation from multiple contemporary sources. In 1598, Henri IV formalized peace with the Huguenots (French Calvinists) with the Edict of Nantes. While many Catholics exhausted from the Wars of Religion supported this rapprochement many others did not. At the same time, a family claimed that Beelzebub and other demons possessed their daughter. During a process of almost daily repeated exorcisms by priests, who also happened to oppose the religious détente, her demons testified, "all the Huguenots belonged to him." Fearful of the consequences, Henri IV dispatched his own commission to discredit this subversive supernatural dissent. Away from the crowded public exorcisms, in a more private place, this commission proceeded to secretly administer the woman genuine holy water on many consecutive days but with no effect. Later, when given ordinary water poured from a special flask only used for holy water she contorted in pain. When an ordinary piece of iron was taken out of its ornate enclosure and presented to the young woman as a relic of the true cross, she fell to the ground tormented. Priests read to the woman a Latin text, misinforming her that it was the Holy Scripture. In actuality, it was Virgil's Aeneid, and she nonetheless squirmed in agony. Other special commissions created by anti-Huguenot clergy, however, reported that, in opposition to the royal commission's finding, she could accurately distinguish bogus from genuine exposures. Reports from the different investigative teams circulated throughout Europe.

Many other well-publicized exorcisms with exposures to sham religious objects are recorded. For example, in 1565, King Charles IX arranged to meet a notorious demoniac who testified to Protestant ungodliness. This demoniac had been tested with ordinary wine deceptively mixed with holy water. Her violent reactions to the concealed holy water confirmed to observers that her possession was genuine. Later, however, when other more skeptical investigators repeated the experiment, she could not distinguish genuine from fake exposures. Other “tricks,” for example, substituting ordinary wafer for consecrated wafer, were also reported in France and elsewhere.

Parallel to this religious skepticism, Renaissance humanists began to discuss their doubts concerning medical practice in general and describe worthless treatments that create unimpeachable experiences of healing. In his influential essay “On the Power of the Imagination” (1580), Montaigne argued that physicians exploit the credulity of their patients with “false promises...and their fraudulent concoctions” and that much of medicine's efficacy is “the power of imagination.” For example, he described, a patient with “stone” who regularly received from his physician the appearances (“with all the formalities”) of a medical enema but without the purposed active ingredients. When his wife notices the bogus situation, she tried to save money and “make due with warm water.” Her husband found out and insisted on returning to the physician with his “genuine” and expensive treatments. In another case, Montaigne case described a woman who is convinced that a swallowed needle is causing her throat pain. Her physicians discounted her story but are unsuccessful in relieving her pain until one gave her an emetic and secretly placed a needle in the vomitus.

Franklin and Lavoisier were avid readers of Montaigne and borrowed from his compilations of Renaissance theories of medical skepticism and the imagination. On the practical level, their pioneering efforts with placebo controls represented the simple absorption of an already well-known 16th century methodology for deciding veracity in the midst of social controversy and colliding claims. For Franklin's contemporaries the commission was an unmistakable reenactment of the devil trials (placebos and all). As Figure 2 illustrates, Mesmer and his henchmen were the new secular devils. With Lavoisier at his side, Franklin is holding up the bright light of their report that banishes the charlatan mesmerists with their hoofs and donkey ears. A devilish animal in the form of a creepy bat-owl testifies with the signature presence of the devil. On the lower right, a woman in a fainting crisis, held steady by a man, takes the pose so often seen in earlier exorcisms illustrations.

Ultimately, this strange story of devils and placebos describes a fundamental human tension between belief and skepticism. The methods developed for adjudication these particular claims inspired a momentous leap for medicine and also helped to establish the nefarious connotations associated with placebo effects.

Further reading

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3. Boulaese, Jean. Le Thresor et entiere histoire de la triomphante vicoire du corps de Dieu sur l'esprit maling Beelzebub, obtenuë a Laon lan mil cinq cens soixante six. Nocolaas Chesneau; Paris: 1578.
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Figure 1. Exorcism taking place in France in 1565

Engraving from Pierre Boaistuau, *Histoires prodigieuses*, 1575. Permission to publish from the Houghton Library at Harvard University is pending the details of how it will be used. A high print quality image will be provided when details when publication details are available.

Figure 2. Magnetism Revealed (1784)

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