## From Hippocrates to Adams County: Tracing Humoral Medicine in Literature and Practice

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### Abstract

Differing attitudes towards medicine prove to be among the chief barriers in modern healthcare practices regarding Hispanic patients. While working as a medical interpreter in Adams County, Pennsylvania, I observed culturally specific beliefs of illness and diagnosis in the Hispanic community. As an example, in November 2006, an eleven year-old female experiencing stomach cramps, nausea, and vomiting entered our mobile clinic. The patient's mother, a Mexican native from Michoacán, claimed her daughter's bilis was instigated by a coraje that she had contracted after an argument with friends at her swim practice. The provider dismissed the claim and assured her that the timing of the events was merely a coincidence and that she most likely had a stomach virus. Such an occurrence warranted particular attention as it demonstrated a cultural handicap between the provider and patient.

The impact of culture on health care delivery is far-reaching. Ethnocentric beliefs influence care givers' approaches towards illness, diagnoses, and managing treatments. As such, the growing diversity of patient populations, with respect to language and culture, poses a difficulty to healthcare providers. Due to various language and culture barriers, providers' abilities to administer culturally competent medicine are challenged. This study exemplifies the cultural brokering that exists between modern Hispanic medical theory and its reception in Western practice.

Modern medicine cannot ignore its rudimentary beginnings as they are integral for understanding alternative healthcare practices and for providing appropriate remedial intervention. By establishing humoral theory as the origin of Hispanic medicine and tracing the intellectual transmission of *coraje* in humoral doctrine through select Spanish Golden Age literature, this paper allows the patient's case of *bilis* in Adams County a claim to authority. Moreover, the provider-patient relationship may be strengthened by patterning Spanish Golden Age literature itself as a cultural agent.

## **Background on Humoral Theory**

Culturally, Hispanic medicine is rooted in humoral theory. Humoral doctrine was introduced to Hispanic culture during Spain's Conquest of the New World by missionaries and physicians and incorporated thereafter into modern belief systems and medical practices. Stemming from Classical Antiquity, humoral medicine arrived to Spain through the Arab intellectuals Al- Razi and Avicenna who had studied and translated Galen and Hippocrates. It is primarily through their efforts that classical medical thinking was transferred by Jewish and Christian practitioners and scholars.

First defined by Hippocrates (460-370 BC), humoral theory remained the most widely accepted approach to medical thinking and practice throughout Europe for centuries. According to this theory, the body maintains health through the equilibrium of the four bodily humors: black bile, yellow bile, blood, and phlegm. Associated with particular organs, temperaments, and elements, the humors were also melded with particular qualities: hot or cold and wet or dry. Illness was believed to arise from an imbalance of one or more humors and it was remedied using the hot-cold law of opposites (Foster, 1988). Moreover, each humor manifests itself physiologically and psychologically according to temperament. For instance, melancholic individuals (cold and dry) are highly intellectual and characterized as pensive and sullen, whereas those of sanguine temperament (hot and wet) are viewed as fun-loving and pleasant. Cholerics (hot and dry) are easily- angered and strong-willed. Similar to melancholics, they are predisposed to intestinal illnesses. Conversely, phlegmatics (cold and wet) are calm and unemotional individuals who are prone to respiratory and brain disorders (Siegel, 1968).

When encountering Hispanic patients today, it is important for healthcare providers to be informed about the principles of humoral medicine as just discussed. Additionally, it would benefit the provider – and ultimately the patient- to recall that humoral practices were once part of a legitimate and intellectual medical system. These practices, characteristic of Spain's Golden Age, have been preserved through literature. As proper health care delivery among Hispanic patients is becoming an increasingly important topic, contributions in Latino healthcare may be fostered by a greater understanding of select Spanish Golden Age literature that reminds readers of humoral medicine.

### Method

Investigating and evaluating the presence of humoral doctrine in Spanish Golden Age literature is important for tracing culturally specific beliefs regarding illness and disease diagnoses among the Hispanic population. Enduring for approximately two centuries, Spain's Golden Age (late 15th to late 17th centuries) was marked by a surge in literature and Classical influence. Initially drafted in the 11th century, Avicenna's medical *Canon* first emerged in print in the 1600s as the principal medical "textbook" in universities throughout Europe. In 1575, the Spanish physician and scientist Huarte de San Juan published his humoral treatise, *Examen de ingenios para las ciencias (An Examination of Wits for the Sciences)*. Oliva Sabuco de Nantes furthered Huarte's claims and in 1587, she published *Nueva filosofia de la naturaleza del hombre y otros escritos (New Philosophy on the Nature of Man and Other Writings)*. Both Huarte and Sabuco remarked on the humoral melancholic relationship of *enojo* (anger), *ojo* (eye), and *los aires* (airs).

In addition to these works, Calderón de la Barca's *El médico de su honra (The Surgeon's Honour,* 1635) and Maria de Zayas y Sotomayor's *El verdugo de su esposo (His Wife's Executioner,* 1647) also provide evidence of humoral medicine in practice. These were the two works investigated for this essay. Calderon and Zayas both demonstrated the intellectual transmission of humoral medicine to the New World through textual references of *mal de ojo* (evil eye), *enojo*, and most importantly, *coraje*.

The linguistic and etymological relationship among *coraje*, *ojo*, and *enojo* is particularly significant. *Coraje* derives from Latin *cor-cordis* (heart) and is the physiological manifestation of *enojo* (anger). *Enojos* are transmitted by the *ojos* as *mal de ojo or ojo de coraje* and can enter through the *ojos* of another, carrying the ill intentions of the *corazón* (heart). Anger or *enojo* affects the heart by heating the blood, thus causing a person to develop a *coraje*.

According to humoral theory, *coraje* was classified as a hot physiological manifestation of anger or intense stress, typically resulting in the condition *bilis*. In *Medical Choice in a Mexican Village*, anthropologist James Clay Young recorded his observation of *coraje* as the cause for *bilis*, an emotional illness triggered by an increase in the circulation of bile in the bloodstream, thus heating the body (Young, 1981). Typically, *bilis* begins as an intense anger and occurs when a person "boils over" (Maduro, 1983). Symptoms of the illness include stomach cramps, vomiting, diarrhea, and loss of appetite.

The presence of humoral doctrine in the literature provides a striking parallel to the case of *coraje* as observed in Adams County, Pennsylvania. In *The Surgeon's Honour*, Calderón demonstrates a connection between *enojo* (anger), *ojo* (eye) and *coraje*. Within this work, Gutierre remedied his wife's perceived threat to his honor by bleeding her to death, claiming that she is ill. Calderón frequently associates Gutierre's jealousy for his wife with the term *enojos*, which manifest themselves through his *ojos*. In possessing an *ojo de coraje* (angry eye), instigated by his *enojos*, Gutierre transmits his jealousy and rage to his wife Mencía.

According to the ancient medical philosopher Galen (129-200 AD), illness -in this case *enojo*- is transmitted by the eyes, carried through the air, and received through the eyes by the intended recipient. The transmission and reception of illness by the eyes is referred to as an "intramission" and "extramission," as documented by Hunain Ishaq in the 9th century (Siraisi, 1990). The affected individual believes he or she has suffered an illness just like that in the modern Hispanic beliefs of *mal de ojo* (evil eye) or *ojo de coraje*. Like the case of *coraje* observed in Adams County, Sabuco argues that an *enojo* can be transferred or sent by means of ill words and received by the eyes through the air. Sabuco describes *enojo* as a "veneno que se pega por el aire y entra por los ojos..." ("poison that transmits itself through the air and enters through the eyes...") (Sabuco, 1981, p. 126).

In *His Wife's Executioner*, Zayas offers a feminine response to Calderón's honor drama. Zayas reveals the destruction of the ill female, Roseleta, in order to preserve the honor of her husband, Don Juan. Like Calderón, Zayas' male protagonist performs a bloodletting which results in the death of his wife. Suffering from a perceived hysteria, Roseleta's melancholic temperament poses a threat to Don Juan's health. Ultimately, he falls ill with melancholy transmitted through the air by means of embittered words. According to Zayas, Roseleta's death resulted from intense anger *(enojo)* or anxiety.

Clearly, the argument during the patient's swim practice merited particular attention. In keeping with humoral theory, angry words were transmitted as *mal de ojo* through the air and received by the patient, only to manifest as a *coraje*. By linking the example of *coraje* in Adams County with the incidence of *enojo* and *mal de ojo* in Golden Age literature, it seems that physicians may be better able to understand their patients and provide a more culturally competent form of healthcare if they have been exposed to this literature.

# Lessons and Implications

In *JAMA*, Dr. Joseph Pastorek (1996) argues that physicians need to become more culturally aware of their patients perspectives as part of their healthcare delivery. He claims that "the astute practitioner realizes that the patient, Western though he or she may be, must not be taken out of context of his or her religious and cultural milieu" (Pantilet, 2006, p. 108). It is important to respect, preserve, and understand popular cultural beliefs when attempting to administer culturally competent healthcare.

The notion of patient autonomy is a worthy complement to this idea, for the provider-

patient relationship may be strengthened by affording the patient a sense of autonomy by extending a willingness to understand the patient's perspective of illness as influenced by language and culture. Lawrence Gostin (1996) agrees that "a genuine desire to understand patients is the best way for medicine to illuminate patient decisions without disrespecting their cultures" (p. 109). Conveying autonomy through understanding also allows the patient to develop a willingness to incorporate Western medicine into their treatment plans and belief systems. Accordingly, by appreciating the examples of classical humoral theory in literature as part of the modern Hispanic system of practice, medical providers may be better able to connect with patients by bridging gaps in their communication of medical and folk wisdom.

Furthermore, the role of the medical interpreter as a medium of cultural understanding and oral communication is fundamental. Educating interpreters in both specialized folkloric terminology and basic humoral theory may benefit the provider- patient relationship in terms of communication and understanding. A reference manual that categorizes humoral conditions, diagnoses, and treatments that are prevalent in the Hispanic community together with their Western complements could facilitate such cultural exchanges.

### Conclusion

Calderón's *The Surgeon of His Honour* and Zayas' *The Executioner's Wife* demonstrate the intellectual transmission of *coraje* and *bilis* as evidenced in Adams County, Pennsylvania. The 11 year-old female patient suffered a *coraje* resulting from the dispute with her peers at her swim practice; this caused an imbalance of black bile in the body and contributed to her *bilis*, a condition dismissed by the practitioner as a stomach virus. By tracing illness using humoral theory, it was made evident that the *mal de ojo/ enojo* were extramitted by the eyes of her peers, transmitted through the air, and intramitted by the young girl as a *coraje*. The survival of humoral doctrine in modern Hispanic medical practice is noteworthy and Golden Age literature has played a vital role in preserving and transmitting examples of humoral theory in practice. A familiarity to humoral medicine gained through Golden Age literature may foster a more culturally competent approach towards Hispanic patients. As such, employing literature as a cultural agent can alleviate barriers and ultimately strengthen the provider-patient relationship.

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### Acknowledgements

Many thanks to Professor Wendell Smith, Department of Spanish and Portuguese at Dickinson College, for his efforts and expertise in all stages of research and in the execution of this project. Earlier versions of this paper were presented at the Pennsylvania Medical Humanities Consortium in May, 2007 in Carlisle, Pennsylvania and LA CHISPA: Conference on Hispanic Languages and Literatures in March, 2008 at Louisiana State University in Baton Rouge, Louisiana.