Chapter

Biomedical Ethics and Communicative Maxims: Case Studies in Outpatient Health

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Abstract

Effectual and ethical healthcare communication is essential in medicine. Health communication not only includes taking medical histories and communicating diagnoses with patients, but its scope is also far broader. In light of recent research that suggests the importance of communication in health, this case study argues more ethical and communicative oversight that may be merited. This case study examines orthonyms associated with dental clinics. The orthonym, or proper noun, as a form of healthcare communication is a communicative practice influencing outpatient health. This communicative entity was selected as it is previously unstudied and adequately narrow so as to be analyzed without tangent. This chapter endorses the amalgamation of communicative maxims and bioethical principles as a backbone for effective and ethical healthcare communication. A framework uniting these maxims and principles is provided.

Keywords: bioethics, health communication, biomedical ethics, communicative maxims, medicine

1. Introduction

In healthcare, communication can be the difference between life and death. Communication happens in a variety of contexts from explaining infectious disease to the masses to messaging providers through online health portals—no matter its function, communication a modality for effective treatment.

Aside from communicating clearly and concisely when taking medical histories and explaining treatment options, studies have shown the importance of effective language [1]. Patient safety and quality of care may be enhanced or endangered, owing fault to whether or not communication is effectual [2]. The language used during clinical interactions may be correlated with health outcomes, for example, patients whose *L1*[1] is not the language of operation at the hospital in which they are receiving treatment have a higher chance of readmission [3].

A patient centered experience built through effective communication may build stronger patient-practitioner relationships, enhance decision making, and reduce patient uncertainty [4]. Clear communication is not only key to the effective exchange of health information, but it is also important when practicing clinical empathy [5]. In addition, adequate communication between patients and

[1] A patient's L1 is their first language or mother tongue.

practitioners promotes higher patient comprehension and therefore may yield higher treatment adherence [6].

Higher treatment adherence promotes patient satisfaction and increases the probability of better clinical outcomes [6]. As communication styles differ between cultural groups, it is important for practitioners to appreciate nuanced differences in communicative styles. As language influences cognition, including that of the patient, it is self-evident that healthcare communication should be interpreted as an influencing factor in patient care and thus be governed by bioethical praxis [7–12].

2. The *lingua franca* of bioethics

Bioethics is founded on the ethical care of patients. With particular insights and influences from various philosophies, all theories of biomedical ethics try to arrive at the best way to honorably and justly treat patients [13]. Recent research suggests the study of bioethics would benefit from methodological study from all perspectives, whether bioscience or the humanities, as the patient in which it seeks to serve may be influenced by more worldviews than one [14].

Philosophers T. Beauchamp and J. Childress laid important framework for bioethical research and analysis [15]. This chapter uses, in brief, their work as a scaffold for bioethical standards that is further combined with communicative maxims. Beauchamp and Childress describe four principles for ethical medical practice including respect for autonomy, beneficence, nonmaleficence, and justice [15].

The principle of *beneficence* states that the clinician has a moral obligation to do all they can to benefit the patient. The principle of *nonmaleficence* declares that clinicians should ensure latent harm from treatments does not outweigh potential benefits, and that patients are not unnecessarily exposed to hurt. The principle of respect for *autonomy* articulates that the patient should always have a choice and play a role in their treatment. The principle of *justice* expresses that clinicians should always aim to do the most good for the most people and distribute resources fairly [15].

As language is the *de facto lingua franca* of bioethics—that is there would be no ability to express nor debate the virtuous versus the corrupt without language itself—it is axiomatic that communicative mores should be included in any sort of debate concerning itself with the benevolence of the patient. Notwithstanding how small or impartial the orthonym may appear in the context of the outpatient clinic, it is a communicative form within healthcare and therefore necessitates bioethical oversight.

Bioethics, to be properly applicable to that which is human, must concern itself with all things humanistic. That is, bioethics must not be so overtly preoccupied with stem-cell research, that it overlooks the outwardly mundane yet strikingly influential lexemes that affect the cognition and treatment of the everyday patient. The study of proper names in healthcare lends to the larger study of healthcare communication which has been proven unremittingly important to the patient. From increased patient satisfaction to higher treatment adherence, proper linguistic form in healthcare contexts is worth deeper evaluation.

3. Communication in healthcare

As language, ethics, and cognition are inherently intertwined [16], there is a need to study all forms of communicative value [including that of the orthonym] from various perspectives including bioethics [14]. Communication between clinics

and communities must respect and abide by ethical institutions to do no harm [17]. Health communication, in order to ethically serve the patient, must be clear and concise, honest, and not sensationalize information; health communication should "adhere to the principles of beneficence, nonmaleficence, respect for personal autonomy, and justice" [17, 18].

When it comes to language, British philosopher H. P. Grice, created a rubric for effectual discourse that this chapter argues should be used in conjunction with the principles of bioethics set forth by T. Beauchamp and J. Childress [15] in the context of healthcare communication. According to H.P. Grice, the language used in communication should include what is relevant and necessary given the environment of the discourse. More specifically effective communication should be appropriate in manner, relevance, quality, and quantity according to its context [5, 19].

Along with communication in general, proper names structure social spaces [20]. The ability to structure social spaces could be interpreted through association, the cognitive process of linking the abstract with the physical. This creates cultural narrative reinforced by language ideologies which are held in the collective consciousness of community members [20]. Concerning bioethics, the institutions within the collective consciousness of a culture are what determines what is morally right or aversive and may already be heavily influential in medicine [21].

4. Onomastic analysis

Relative to their cultures, orthonyms denote people, places, and things [20]. There is some evidence to suggest that descriptions alone cannot uniquely distinguish an object, place, or person, therefore requiring a proper noun to represent the physical object [20, 22–24]. However, time changes the meaning of language and the ethics of a community can change over time; proper nouns are context-dependent [22].

Within the analysis of proper nouns, social semiotics provides a framework for the context and the constituent parts [25]. Through the analysis of an orthonym, ideologies surrounding healthcare can be interpreted [26, 27]. The orthonym can also be interpreted as assigning roles to the creator verses the viewers [26, 28]. Throughout this chapter, time is spent on how the creators (most likely dentists) perceive themselves and viewers (patients) and how the discourse may be interpreted as potentially influencing the viewer's (patient's) cognition.

This creator-viewer relationship demonstrates the reflective influence communication and communicators have on each other [5, 29]. It is widely reported that communication plays a role in cognition, which in any event within healthcare ought to be upheld to bioethical principles [30].

5. A trip to the dentist

Before proceeding to the case study portion of this discussion on the intersection of communicative maxims and bioethical principles, this section will exemplify a case where the violation of communicative maxims ultimately leads to the undermining of biomedical ethics. The following anecdote illustrates a hypothetical patient experience at "Luxe Cosmetic Dentistry," and aims to begin this chapter's discussion on bioethical principles within healthcare communication at the micro-level.

A patient is browsing listings of local dentists on the internet. Without a referral, they rely on things such as start ratings and the names of various clinics.

The patient stumbles upon "Luxe Cosmetic Dentistry." What comes to mind when reading the name "Luxe Cosmetic Dentistry?" The patient's mind may bring up images of beautiful teeth, linen clothed, perfectly tanned people on a sand beach, living the life of luxury—an image straight out of The Condé Nast Traveler. And that would be the purpose! Names are chosen specifically to draw on the human mind's ability to draw from memories, feelings, and associations. This orthonym, or proper noun, relies on the patient's idea of luxuriousness to paint an image of the dental clinic the patient will find. This patient, upon reading the name of this dental clinic, and imagining how pleasant of an experience a visit might be, decides to book an appointment. But when the patient arrives, this is what they find (**Figure 1**).

When the patient enters the waiting room, they are shocked, even angry. This is nothing like what they were expecting. Based on the patient's framework about what a dental clinic titled "Luxe Cosmetic Dentistry" should look like, the patient experiences a state of dissonance. The patient decides to continue with the appointment, but the patient's care may be at risk. When patients feel uncomfortable, they may be less likely to communicate properly with practitioners about their health. In this case, the patient just wants to get the appointment over with.

If the language used properly reflected its referent, the dental clinic may have more accurately looked like the following (**Figure 2**). If this were the case, the language would have clearly communicated, set patient expectations, and set the tone for the appointment—all before the patient started speaking with the doctor. Thus, in this analogy, the language of the orthonym has directly affected the patient's experience, and may go on to have a negative impact on patient care. And in such a case, this form of healthcare communication has violated bioethical principles.

By violating the aforementioned communicative maxims the principles of bioethics were also violated. As insignificant as the name of an outpatient clinic may seem, it is clear that this type of communication within a healthcare context could influence patient care and ought to be guided by bioethical principles. In this anecdote one example of a violation was presented, this chapter will examine the multiple way in which orthonyms can uphold or violate bioethical principles.

Figure 1.
Probably not the dental clinic the patient was expecting [31].

Figure 2.
Perhaps something more along the lines of what a patient might expect from a dental clinic titled "Luxe Cosmetic Dentistry" [32].

6. Methodology

Healthcare communication is most considerably studied on a larger scale. To add more breadth to the field of health communication research it was desired that a previously unstudied form of communication was selected. To aid in the ease of application of various principles, communicative values with succinctness were also preferred. The proper noun was selected as it met both criteria.

Using Google's map apparatus, clinics in Chicago were searched. The names of 50 dental clinics were recorded with attempt to select equal portions of dental offices on Chicago's North, West, and South sides. Each of the clinics on the list was assigned a number [1-50]. Using the Random Number Service's random integer generator, 10 numbers were selected from integers 1–50 [33]. These 10 numbers and the dental clinics they represent were designated for the analysis.

The medical dental clinics selected are not intended to represent a complete sampling but to offer localized analysis. The City of Chicago is composed of distinct neighborhoods, each with specific socio-economic characteristics; various neighborhoods were selected to offer diversity to the study. Socioeconomic data of the various neighborhoods were gathered from The Statistical Atlas which sources from the United States Census [34].

The data was then analyzed in the context of the aforementioned four bioethical principles and the four communicative maxims to assess ethical compliance and communicative value. The above rubrics (**Tables 1** and **2**), which offer concise applications of the theories of Grice [19], Beauchamp and Childress [15], Parli [20], and Webber [22], and others were created to aid this case study.

Along with broad-reaching analysis of orthonyms specifically and healthcare communication in general, this analysis will offer focused insight. In Illinois, where this research has been conducted, there are specific guidelines that dental practices must follow when representing themselves through the orthonym. These laws are a

preventative measure should outpatient dental clinics attempt to misrepresent their practice with potential consequences on patient health.

The Illinois Dental Practice Act [37] states that dental clinics may not include titles or specialties in their orthonym that they are not certified to perform, use words that misrepresent or cause the patient to misinterpret services provided in order to gain more patients, practice under a false name, allow another uncertified individual or clinic to practice under their name, and must include disclaimers when appropriate.[2]

In addition to regional regulations limiting the naming of dental clinics, the American Dental Association sets national regulations for dentists [38]. These standards (**Table 3**), as influenced by bioethical principles, state that an orthonym that is misleading in any way is considered to be unethical.[3]

The Lexeme	What lexemes compose the orthonym? What are the possible and perceived definitions of these lexemes? [20, 35]
The Environment	What is the socioeconomic composition of the community? How is cultural context reflected within the orthonym? [23] What association habits contextually define this discourse? [22–24, 36]
The Significance	What significance is assigned through association habits? [22, 36] How does this discourse position itself within the community? How might this discourse influence the patient and the practitioner? [26, 27]

Table 1.
A brief guide for onomastic analysis and discussion.

Does the discourse follow the Four Communicative Maxims?	**Does the discourse comply with the Four Bioethical Principles?**
1. Manner: Is this communication in a manner that is appropriate within a healthcare setting?	1. Beneficence: Does this communication work toward benefitting the patient?
2. Relevance: Is this form of communication relevant to the task at hand?	2. Nonmaleficence: Does this communication disallow harm to the patient?
3: Quality: Is this communication of quality, that is does it provide false information?	3. Respect for Autonomy: Does this communication promote the patient's informed involvement in their health?
4. Quantity: Is this communication appropriate in amount for which the medium requires?	4. Justice: Does this communication represent fair distribution of health services in the community?
[*] *If the answer to any of the above is* "no," *how might the discourse be altered so as to better fit communicative and ethical standards within healthcare communication?*	

Table 2.
A rubric for analysis of communicative value and bioethical compliance within healthcare communication.

ADA Principles of Ethics & Code of Professional Conduct [Revised 2018]
5.G. Name of Practice Since the name under which a dentist conducts his or her practice may be a factor in the selection process of the patient, the use of a trade name or an assumed name that is false or misleading in any material respect is unethical. Use of the name of a dentist no longer actively associated with the practice may be continued for a period not to exceed 1 year.

Table 3.
Excerpt from the American Dental Association's document on ethical standards.

[2] The full version of the *Illinois Dental Practice Act* can be found at www.ilga.gov.

[3] The full version of the American Dental Association's *Principles of Ethics & Code of Professional Conduct (2018)* can be found at www.ada.org.

7. Data and analysis

In this case study, the analysis of ten medical dental clinic names will be categorized in units for ease of reading. The units include explanations of orthonyms that: (a) list medical credential, (b) describe the ideal patient, (c) focus on the patient experience, (d) refer to health outcomes and (e) appeal to patient identity (**Table 4**). Each section will anecdotally analyze clinic names used in this case study.

Communicative purpose	Description
Orthonyms that list medical credential	Orthonyms in this category contain lexical entries that position the clinic or dentist as qualified to operate [ex: D.M.D. or D.D.S.]
Orthonyms that describe the ideal patient	Orthonyms in this category contain lexical entries that describe the type of patient they seek to treat [ex: pediatric]
Orthonyms that focus on the patient experience	Orthonyms in this category contain lexical entries that describe services offered [ex: salon]
Orthonyms that refer to health outcomes	Orthonyms in this category contain lexical entries that refer to patient health outcomes [ex: perfect smile]
Orthonyms that appeal to patient identity	Orthonyms in this category contain lexical entries that build patient rapport through identity [ex: ownership]

This table shows the major categories of orthonyms in the region of data collection.

Table 4.
Regional trends in dental clinic names.

7.1 Orthonyms that list medical credential

Medical credential is important—it is what determines whether or not someone should be operating on a patient. Whether the proper name uses the word 'doctor' or lists dental degrees such as D.D.S. or D.M.D., or specialties such as periodontics or maxillofacial surgery, these orthonyms are communicating with the patient that the dentist they are seeing is indeed qualified to be practicing dentistry. Due to their nature, the misuse of lexemes in this category would be highly unethical.

Dr. Joseph Watson, DDS. This orthonym is simple and direct. It is made up of the doctor's name followed by their medical credential. The words used in the orthonym are obvious in their meanings and do not require the patient's analysis. This language conforms to discursive maxims in that it uses only what is necessary to convey only what information is essential. This dental clinic is located in the South Shore Neighborhood of Chicago on Chicago's Southside, and is 2.8% White, 1.8% Hispanic, 93.3% Black, 0.4% Asian, 1.3% Mixed, and 0.4% other. The median household income in this neighborhood is $27,900.

This orthonym states medical credential and education level twice. This may be a reinforcement to the patient that the dentist is an expert and qualified to do their job by using "Dr." and "DDS" in the clinic's name. This may also be interpreted as the dentist positioning themselves as of greater education level perhaps serving to increase the gap between the patient and the practitioner. This orthonym adheres to both communicative maxims and bioethical principles: It communicates well and does not appear to cause harm.

Dr. Louis C Rutland III. This orthonym takes a similar form as the previous. It is short and direct and does not require interpretation. The words used in this orthonym are orthonyms on their own combined with a marker of education level. This orthonym is short and gives only the necessary information in accordance with discursive maxims [19]. Dr. Rutland's office is located in the East Chatham

neighborhood of Chicago on Chicago's Southside. This neighborhood is 2.7% White, 1.2% Hispanic, 94.4% Black, 0.8% Asian, 0.5% Mixed, and 0.3% Other, and has a median annual income of $23,800. Furthermore, this orthonym is similar to that of Dr. Joseph Watson, DDS and the socioeconomic composition of the surrounding community is also very similar. As community reflects cultural values, and cultural values are the collection of simultaneously performed identities, this orthonym might be interpreted as influenced by and influencing the neighborhood.

The use of "Dr." could be interpreted as a means of positioning the dentist as doctorally educated as well as informing the patients that they have the proper medical credential. As previously mentioned, communication has the power to influence within medical contexts. This orthonym could be interpreted as building trust with the patient before they even walk into the door. For this reason, it could be interpreted ethically and communicatively satisfactory.

7.2 Orthonyms that describe the ideal patient

Describing the ideal patient attracts only the patients that a dentist can properly serve. For example, a dental clinic that uses the word "pediatric" is probably not somewhere that maxillofacial surgery is performed. This could be viewed as cutting to the chase, as it were, and prepping patients for what to expect when entering a specific dental clinic. Ethical problems may occur when services are misrepresented in this way causing the patient some level of hurt.

1st Family Dental of Andersonville. This orthonym gives a *prima facie* description of the ideal patient through the use of the lexical entry "family." It is made up of patient descriptors as well as an area marker. There is no need for interpretation here. For example, one would not interpret this to be a luxury dental office, but, rather one where parents and children can get the treatment they need. This dental office is located in the Andersonville neighborhood on Chicago's Northside and is 68.4% White, 10.5% Hispanic, 7.4% Black, 10% Asian, 3.6% Mixed, and 0.2% Other. Habitants of Andersonville have a median household income around $76,500.

The words that make up this orthonym that are of particular note include "1st", "Family", and "Andersonville." By including first in the orthonym, this dental office could be perceived as claiming their territory. The word "family" is also important and could be understood as a marker for the clinic's ideal patient. By using the word family in the orthonym, the creators are designating general services for the whole family and effectively warding off patients who need more specialized procedures such a periodontal surgery. This orthonym could also be interpreted as positioning itself as a family friendly place within the community, one that brings to mind toys in the waiting room and the occasional crying child. While the communicative values are ethical, they could be clearer [19]. Family is culturally defined and a dentist may find ethical dilemmas within. Ethical principles may also be overlooked should this clinic not actually be a family dental practice, whether implicitly or explicitly, which would then flout both communicative and ethical principles.

Sonrisa Family Dental. This dental clinic's name, half in Spanish and half in English, yields important information about this clinic. The words in this orthonym include "sonrisa" and family dental. Family dental warrants no explanation, though to some readers "sonrisa" may be an unfamiliar term. Sonrisa means smile in Spanish. This orthonym code switches between Spanish and English to say what may be translated as "Smile Family Dental." For the person in the community in which this clinic is set, it may be viewed as following the norms of effective discourse. It is short and explains its patient base: families. As a perfect example of

discourse being shaped by and shaping community, if this dental office was located in a different neighborhood the definition of the word "sonrisa" may go amiss.

The Sonrisa Family Dental selected for this study is located in McKinley Park. Sonrisa Family Dental appears to have multiple locations across Chicago yielding slight complication and potential inaccuracy to this research. McKinley Park is located in Chicago's Southwest side and is 16.9% White, 62.7% Hispanic, .9% Black, 19% Asian, 0.7% Mixed, and 0.8% Other. This clinic has a large population of potential Spanish-speaking patients surrounding it, where other neighborhoods where this clinic exists, such as Archer Heights on Chicago's Southwest side has a majority Black population [67%] with Hispanic being the second largest at 23.7%.

By using a Spanish word in the orthonym, the potential patient may note that this clinic may be a place they can use the Spanish language. This may also be observed as serving to frame this medical dental clinic as a safe place for community members who do not know English to seek medical help. As discourse may influence worldview, this orthonym may develop ideas or thoughts in the mind of the patient about the type of treatment they are to receive [bilingual] before they actually walk into the clinic. This orthonym falls in line with bioethical principles that seek to serve the benefit of the patient so long as the orthonym accurately describes the practice, and only in the context of a patient who understands Spanish.

Montrose Tooth Fairy. This orthonym is describing the ideal patient in a more abstract way. The words in this orthonym do not explicitly state that it is a dental office at all, nor do they attempt to describe any sort of medical credential. In fact, a child may even interpret this establishment as a place to bring a fallen tooth for a monetary reimbursement. Arguably this discourse, though it requires some extrapolation, may be somewhat effective, once the patient realizes that this dental clinic probably offers pediatric services.

Montrose Tooth Fairy is located in the Uptown neighborhood on Chicago's Northside. The population of Uptown is 44.9% White, 12.9% Hispanic, 28% Black, 11.5% Asian, 2.1% Mixed, and 0.6% Other. The median household income in this community is $37,600 a year. As this orthonym is more metaphorical than literal, the patient's mind may be perceived as subconsciously left to explore the intended meaning.

Along with describing the ideal patient, this orthonym could be understood as relaxing the potential patient. For example, a child going to this dental office may have warm feelings about the tooth fairy and may not experience as high of levels of nervousness when visiting for cleanings or other procedures. As with the previously mentioned examples of healthcare communication, this communication hesitantly falls in line with bioethical principles given it is an accurate representation. If, for example, this clinic turned out to be a place where children were not welcomed and pediatrics was not a specialty, this could be viewed as maleficent. A more explicit orthonym that requires less analysis could be more bioethically appropriate.

7.3 Orthonyms that focus on the patient experience

Orthonyms that are focused on the patient experience are found as taking creative liberties within healthcare communication. For example, a dental clinic using the word "salon" in their orthonym would strike a different image in the perspective patient's imagination than a clinic simply named "dental office." This form of language verges on art and may be beyond the scope of healthcare communication. Ethical concerns may arise for those clinics that use superfluous adjectives that may lead patients to expect something beyond the practitioner's scope.

Art of Modern Dentistry. The name "Art of Modern Dentistry" sets this clinic apart from the previous. By alluding itself to art, the words used in this proper

name are less obvious in what they are referring to. The potential client may be left to imagine various art exhibitions, a beautiful office, or perhaps smiles so brilliant that they are art themselves. As with metaphors, the locutionary act of this dental clinic does more than just identify itself as a place to get teeth cleaned. It speaks to the patients who may wish to have a more luxurious experience [20, 35].

Art of Modern Dentistry is located in the Lakeview neighborhood on Chicago's Northside where the population is 80% White, 8% Hispanic, 3.5% Black, 5.8% Asian, 2.5% Mixed, and 0.2% Other. The average household income is approximately $106,900. It is no surprise that within this neighborhood the acceptable lexical values to be used in health communication may include "art" and "modern." The cultural context of this community allows this dental clinic to position itself as desirable, or a place of art and beauty [22, 36]. In fact, this descriptive name could be viewed as having the ability to slightly alter the worldview of the patient according to social semiotic theories [25]. The patient upon viewing this orthonym may now believe that going to the dentist does not have to be a routine occurrence, but may be more akin to the museum experience instead.

This clinic may be understood as positioning itself as a place of luxury, and positioning patients as art connoisseurs rather than ordinary persons with cavities [26, 27]. Association habits of capitalistic cultures favor the heavenly over the mundane; the name of this clinic is furthering association habits and using such association habits to its gain [24]. Dentistry is not always a trip to the museum, and using this type of language within healthcare contexts may not be in the best interest of the patient. This orthonym may be creative, but it could be argued that it is on the brink of violating communicative maxims and ethical principles.

Dental Salon. This two-word orthonym is simple yet luxurious. The first part of this orthonym, "dental" is defined unambiguously as a that relating to dentistry. The second word in the orthonym is up for interpretation. Thoughts of relaxation could be associated with the word salon. This orthonym is on the edge of communicative effectiveness; it may take a moment to assess whether this is a dental office or perhaps a place where one can get a sort of spa treatment for their mouths. Ineffective communication in healthcare in-and-of itself may be considered to sidestep bioethical principles.

Dental Salon is located in the Ranch Triangle neighborhood on Chicago's Northside. This neighborhood is 86.3% White, 6.7% Hispanic, .6% Black, 5.7% Asian, 3.1% Mixed, and 0.2% Other. The median household income for Ranch Triangle is $146,600. This orthonym reflects the surrounding community and simultaneously constructs it while placing focus on patient indulgence. Bioethically the question must be asked if outpatient clinics should represent themselves in a manner that may be misleading and out of the scope of healthcare.

Chicago Smile Design. This is another example of the clinic being glamorized. Instead of going to get a cleaning, patients may be visiting this dentist to have the feng shui of their mouths rearranged. Design aside, the lexemes making up this proper noun are all rather familiar to the patient. The smile could be defined culturally, though facial tissue and bone are pretty culturally transcendent. However, the word design in this orthonym is where creative choices were made. When thinking of design, one's mind probably does not immediately imagine their dentist.

Chicago Smile Design is located in the Old Town Triangle neighborhood on Chicago's Northside. The population is 77.1% White, 5% Hispanic, 5.3% Black, 8.5% Asian, 3.1% Mixed, and 1% Other with a median household income of $99,700 per year. This orthonym is framing and positioning this dental office as a place of luxury within the community. This discourse could also be viewed as a reflection of the surrounding community; with a comparatively high median household income it is no revelation that this office is describing itself as luxurious through its

orthonym and appealing to the vanity of the surrounding community. Within the communicative maxims it may not be effective; causing the patient to wonder what treatments are offered has the potential to lead to maleficence.

7.4 Orthonyms that refer to health outcomes

In dentistry, health outcomes may vary from more serious, such as a periodontal procedure, to the more superficial whitening procedure. Though whitening may be more of a cosmetic procedure, than anything else, the general public tends to see bigger and brighter smiles as healthier. In this case, these will fall under the category of health outcomes, though representing cosmetic procedures such as teeth whitening as a health outcome may intrinsically be unethical. By implying that perfectly white teeth are health outcomes, more patients may opt for unnecessary treatments.

Perfect Smile Dental Spa. Generally, the focus of this orthonym directs patients to two areas: that of having a perfect smile, and that of going to a spa. In this orthonym the only word that may lend itself to interpretation is "spa." As previously addressed, the potential patient may not immediately realize what is meant by spa, rendering this communicative value on the verge of ineffectiveness.

Perfect Smile Dental Spa is located in the North Center neighborhood on Chicago's Northwest side. North Center has a population that is 77.6% White, 11.7% Hispanic, 2.1% Black, 4.9% Asian, 3.4% Mixed, and 3% Other, with a median household income of $89,200. Where this orthonym refers to the patient outcome of a "perfect smile" it could also be understood as reflecting the cultural ideal to have said perfect smile, though such things as bleaching or veneering may be cosmetic procedures. Within healthcare communication, part of nonmaleficence and benevolence is to keep patients properly informed and not lead them astray. This instance of communication, along with others in this case study, may be reinforcing the idea that a "perfect smile" is healthier, potentially leading to unnecessary treatments.

Big Smile Dental. What does one picture when reading the name "Big Smile Dental?" By cultural association, with smiles come feelings of happiness. Not only could this clinic be regarded as providing big smiles, but perhaps a lifestyle of smiles or of happiness. Big Smile Dental is located in the Logan Square neighborhood on Chicago's Westside. Logan Square is 32.4% White, 57.4% Hispanic, 6% Black, 2.4% Asian, 1.6% Mixed, and 0.2% Other, with a median household income of $54,000.

In a sociological analysis of today's culture, big lustrous smiles are sold in every way. Where Big Smile Dental does not use words to portray itself as the most luxurious place in the city, or a place where family is created, it capitalizes on big smiles. This proper name could be taken as influencing people's point of view by associating big smiles with this particular clinic. This communicative value may serve to attract new patients seeking a beautiful smile, however, this may be interpreted as an unethical capitalistic motives in healthcare exploiting the cultural ideal and causing patients to seek more treatment than may be necessary.

7.5 Orthonyms that appeal to patient identity

The identity of the patient is important—it is part of their health and can be part of their treatment. These orthonyms contain lexical values that build rapport with the patient through a focus on the patient's identity. Whereas the identity of the patient is not to be neglected, it can also be understood that it should not be used to increase monetary worth through gathering a larger patient base. Listening to the patient and understanding their culture and backstory may be a more suitable manner for connecting with the patient.

American Dental. This orthonym may be appealing to a sense of identity as well as patriotism. This dental clinic is located in located in Avondale on Chicago's Westside. American Dental appears to have multiple locations with the Avondale clinic selected through the random selection process. Avondale is 35.7% White, 54.5% Hispanic, 2.1% Black, 5.5% Asian, 2.0% Mixed, and 0.2% Other, with a median household income of $54,4000. Through inserting identity markers such as "American" in its orthonym, this dental clinic could be positing itself as a place for patients who identify with American values or have a strong sense of American identity. By including unnecessary values in its name, this clinic may be ignoring the maxim of relevance; the nationality may not be an essential lexeme in discourse surrounding dental care. Where cultural competence may be necessary during the patient interaction, nationality outside of the interaction may be entirely auxiliary. In fact, this form of identity marker may serve as a potential deterrent to patients who may feel sequestered from "American" culture.

My Dentist Chicago. The name of this clinic alludes to ownership and uses language to frame itself within the community. Arguably, My Dentist Chicago could be considered as using the "my" in its orthonym to promote a sense of ownership with its customers. This dentist is located in Beverly View on Chicago's Southside and is 14.3% White, 1.1% Hispanic, 82.4% Black, 1.1%, Asian, 1.1% Mixed, and 0% Other. Beverly View has a median household income of $70,300. Where the word Chicago may be viewed as a relevant location marker, the creation of a sense of ownership is a known communicative technique to create a stronger bond with patients. This could be taken as a revenue-generating practice and may therefore not be in the best ineptest of the patient. Communicatively the orthonym does not disregard communicative maxims, in fact the phrase "my dentist" may be an utterance of natural occurrence in language. However, bioethical principles must always question whether something is being used to increase patient-base.

8. Discussion

One of the larger trends observed is the difference of the language used in orthonyms of clinics in upper middle class and wealthy communities versus the language used in lower socioeconomic communities. Lexical values used in proper names in those communities that are in the middle class and wealthy category include words that appeal to a luxurious experience.

From words like modern, art, design, and salon, these clinics are creating specific images in the community's mind that influence perceptions of dentistry. This relationship is reflexive, the community could be interpreted as maintaining these ideologies surrounding their health, which may influence the public health of the community. Something with the power to influence public health, even on a micro-scale, must be under bioethical guidance. In this example, healthcare communication could be interpreted as widening the health equity gap, therefore breaking the bioethical principle of justice. The use of such sensationalized health communication may also show disregard for the principle of nonmaleficence: It may decrease harm to the individual and the community to have this form of healthcare communication more strongly regulated.

In lieu of health communication in wealthy communities, there are many clinics in communities of lesser socioeconomic standing that seem to bypass glamorous lexical entries. The language surrounding dental clinics in these communities may be communicating something different. In these communities clinics may be named after the dentist themselves, or have other lexical entries that appeal to things like patriotism, ownership, and heritage language.

One major trend includes naming a clinic after the dentist who owns or founded the practice along with their medical credential. Through bypassing appeals to lavishness, clinics with names that are more straightforward and only contain the name of the provider. Their qualifications could be viewed as positioning in authoritative positions within their communities. This case study argues that this may be the form of orthonym that is in least defiance of communicative maxims and bioethical principles.

Ethical questions start to arise when noting the difference between communicative practices in wealthy communities versus this communicative practice which does exist in both ends of the stratum, though more concentrated in lower- and working-class communities. This form of communication is more straightforward and to the point. Because of this it could be taken as protecting the patient's autonomy and practicing beneficence. By not using persuasive or otherwise auxiliary language to attract patients, the patient may have more agency to pick a dentist in an unbiased way. It could also be upholding the principle of beneficence in this same way; by not using persuasive language that may be deceitful, the patient is protected.

However, it could also be argued that using linguistic markers like these to send cognitive cues to patients is a form of asserting authority over patients. Orthonyms with lexical entries such as "doctor," "DDS," and "DMD," can be found across socioeconomic boundaries. In this case the patient is no longer getting distracted or persuaded by lexemes, but the practitioner and practice may be using this form of health communication to build and maintain barriers between the patient and the practitioner. This practice as used across a community or region may flout the principle of nonmaleficence. By increasing barriers patients may struggle to effectively communicate with their practitioners.

Another observation within this case study includes names that describe health outcomes and the ideal patient. Both forms of orthonym were dispersed commonly throughout the sample, not only existing in an area of certain socioeconomic status. "Big Smile Dental" and "Perfect Smile Dental Spa" both appealed to the desired health outcomes of patients; through the use of perfect smile and big smile these clinics are advocating their ability to give patients what they want, a perfect or big smile. In another example, "Montrose Tooth Fairy," "Sonrisa Family Dental," and "1st Family Dental of Andersonville," are quite unconcealed as to whom they are attracting as patients: children and families.

By using such markers in their proper nouns, they are effectively filtering out any patients that are looking for a spa experience, and welcoming in families and children. Alluding to health outcomes and the ideal patient for the practice do fall within the guidelines for effective communication—these modalities help patients pick a clinic to seek treatment at. However, in the same light, these practices may also be going against bioethical principles. For example, alluding to cosmetic outcomes as health outcomes may press patients to pursue procedures that are not necessary with potentially harmful side effects such as chemical burns that result from whitening procedures. This form of communication may promote the violation of the principle of nonmaleficence.

Through this case study, this research provides a foundation for the future study of clinic names as to how they might influence the patient experience, and the combination of communicative maxims with biomedical ethical principles. For example, by seeing "Perfect Smile Dental Spa" on the front door of a clinic, it could be argued that the patient has already been predisposed to feel a certain way about their experience at that clinic. The ways a patient feels about their treatment are argued to be an extension of the treatment itself. The authority of language in this application is difficult to measure due to its penchants on cognition, but is interpreted as influencing the cognition of patients nonetheless. One may ask, *If the*

pre-dispositions on the patient's experience are good, why does it matter? Not only is it relevant as to whether or not these communicative values are ethical or unethical, it is worth thinking of this form of communication on a spectrum. One communicative form may be more ethical than another on the spectrum, and by allowing the spectrum to exist potential divergences may occur.

If a patient is predisposed to perceive care in a certain way many violations of bioethical principles may occur. If a patient is predisposed to perceive their healthcare as a positive experience, when they were actually receiving below-standard care, it poses an ethical problem. On the other hand, if a patient is predisposed to be unsatisfied with what is actually a highly-effective treatment, their adherence to that treatment and relationship with the clinician may suffer. Along with this influence language has on healthcare, language may also assign value, or perhaps assign who is worthy to receive certain experiences as a patient. For example, the general volume of words that create a sense of luxury or relaxation in dental clinic orthonyms, including spa and salon, are indicative of the care the patient may receive at that location. As previously mentioned, the language used within a community may influence perception and cognition in a cyclical manner.

This research posits that there could be a *juste milieu* for naming in a bioethically sensible manner. Clinic names that include a combination of *the practitioner's name, medical credential,* and *specialty* could be considered as *ad hoc* guidance for clinic naming procedures. This case study argues that orthonyms such as *Dr. de Rothewelle, Periodontist, Dr. de Rothewelle, DMD, Orthodontic Associates,* and similar most clearly observe communicative and biomedical ethical standards.

Guidelines for Selecting a Clinic Name		
In order to communicate efficiently and effectively and maintain the principles of bioethics namely to protect the patient, research recommends including only one or more of the following units.		
I. **The Practitioner's Name.** Limited to combination of given and surname, or surname exclusively. May include the honorific "Dr."	II. **Medical Credential.** Academic degrees required to practice such as D.D.S., D.M.D., or foreign equivalents.	III. **Specialization.** Specialties as approved by the governing body such as periodontal, orthodontic, and maxillofacial.
By including only the above communicative values, the patient will receive information that is appropriate in manner, relevance, quantity, and quality. These communicative values promote on a microscale the bioethical principles of beneficence, nonmaleficence, justice, and autonomy. **A note on auxiliary words: lexemes of this type, such as office, practice, associates* et cetera *may be used if doing so enhances communication.* ***A note on the use of honorifics: as in many contexts (i.e. education, research, theology, et cetera) "Dr." may be used as an honorific not denoting one's profession as a doctor. For this reason, the use of "Dr." should be followed by granted medical credential.*		

Due to the role of communication's influence on the patient experience, health outcomes, and treatment satisfaction, further analyses should be extended through all communicative modalities with the potential to influence cognition and patient care. This includes units of micro-communicative value such as the proper noun. This research further suggests that the communicative maxims and bioethical principles be further analyzed in symbiosis to enhance healthcare communication.

9. Conclusion

Due to language's ability to influence cognition, language's place within healthcare is of vital importance. Whether it be the communication of treatment

instructions, or maintenance of doctor-patient rapport, not only is effective communication essential, but communication that aligns with communicative maxims and bioethical principles within healthcare settings is necessary. After a micro-analysis of one facet of healthcare communication, this case study found that the orthonym may be an influencing factor in patient care. Ascribing the potential correlation between this type of communication and health outcomes, this research suggests that a bioethical approach needs to be adopted and invites sustained study of bioethics as is applicable to healthcare communication through the symbiosis of communicative maxims and bioethical principles.

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References

[1] Partida Y. Language and health care. Diabetes Spectrum. 2012;**25**(1):19-22. DOI: 10.2337/diaspect.25.1.1

[2] Schyve PM. Language differences as a barrier to quality and safety in health care: The joint commission perspective. Journal of General Internal Medicine. 2007;**22**(Suppl 2):360-361

[3] Karliner LS, Kim SE, Meltzer DO, Auerbach AD. Language barriers and hospital care. Journal of Hospital Medicine. 2010;**5**:276-282. DOI: 10.1002/jhm.658

[4] Epstein RM, Franks P, Shields CG, et al. Patient-centered communication and diagnostic testing. Annals of Family Medicine. 2005;**3**(5):415-421. DOI: 10.1370/afm.348

[5] de Rothewelle JC. Comics and medical narrative: A visual semiotic dissection of graphic medicine. Journal of Graphic Novels and Comics. 2018:1-27. DOI: 10.1080/21504857.2018.1530271

[6] Henry SG, Matthias MS. Patient-clinician communication about pain: A conceptual model and narrative review. Pain Medicine. 2018;**19**(11):2154-2165. DOI: 10.1093/pm/pny003

[7] Boroditsky L. Linguistic Relativity, Encyclopedia of Cognitive Science. London: Boroditsky; 2003

[8] Chomsky N. Language and Mind. Cambridge, United Kingdom: Cambridge University Press; 2006

[9] Pinker S. The Language Instinct: How the Mind Creates Language. Perennial; 1994

[10] Sapir E. The status of linguistics as a science. Language. 1929;**5**(4):207-214

[11] De Gruyter W. History of Linguistic Thought and Contemporary Linguistics; 1975

[12] Trabant J. How relativistic are Humboldt's "Weltansichten"? In: Martin P, Verspoor MH, editors. Explorations in Linguistic Relativity. 2000

[13] Donaldson TM. In: Clark PA, editor. Ethical Resources for the Clinician: Principles, Values and Other Theories, Contemporary Issues in Bioethics. IntechOpen; 2012. DOI: 10.5772/34750

[14] Morales-González Á, Tirado-Lule JM, González-Cisneros A, López-De-León EO, Sanchez-Morales A, Manzanilla-Granados HM. In: Morales-González JA, Nájera MEA, editors. Bioethics in Education, Reflections on Bioethics. London, United Kingdom: IntechOpen; 2018. DOI: 10.5772/intechopen.74519. Available from: https://www.intechopen.com/books/reflections-on-bioethics/bioethics-in-education

[15] Beauchamp T, Childress J. Principles of Biomedical Ethics. 6th ed. Oxford University Press; 2009

[16] Alba-Juez L. Perspectives on Discourse Analysis: Theory and Practice. Newcastle upon Tyne, United Kingdom: Cambridge Scholars Publishing; 2009

[17] Popa F. The value of ethics in health communication. Journal of Medicine and Life. 2008;**1**(4):363-364

[18] Strasser T, Gallagher J. The ethics of health communication. World Health Forum. 1994;**15**(2):175-177

[19] Grice HP. Logic and conversation. In: Cole P, Morgan JL, editors. Syntax and

Semantics, Speech Acts. Vol. 3. New York: Academic Press; 1975. pp. 41-58

[20] Parli U. Proper name as an object of semiotic research. Sign Systems Studies. 2011;**39**(2)

[21] Boas F. Race, Language and Culture. New York: Free Press; 1966

[22] Webber ET. Proper names and persons: Peirce's semiotic consideration of proper names. Transactions of the Charles S Pierce Society. 2008;**44**(2)

[23] Pierce CS. In: Hartshorne C, Weiss P, editors. 1931-1936. The Collected Papers. Vol. 1-6. Cambridge, MA: Harvard University Press; 2007. DOI: 10.1007/s11606-007-0365-3

[24] Saussure F. Course in General Linguistics. New York: Philosophical Library; 1959

[25] Thibault PJ. Editorial: Social Semiotics. In: The Semiotic Review of Books. Vol. 4. Peterborough, Ontario, Canada: Trent University; 1993. p. 1

[26] Davies B, Harre R. Positioning: The discursive production of selves. Journal for the Theory of Social Behaviour. 1990;**20**(1):43-63. DOI: 10.1111/j.1468-5914.1990.tb00174.x

[27] Schiffrin D. Approaches to discourse. In: Blackwell Textbooks in Linguistics. Oxford: Blackwell; 1994

[28] Tirado F, Galvez A. Positioning theory and discourse analysis: Some tools for social interaction analysis. Forum: Qualitative Social Research. Sozialforschung. 2007;**8**(2):1-28

[29] de Rothewelle JC. Visual pathologies: The semiotics of the patient and the practitioner in comics. In: Primary Care. IntechOpen; 2019

[30] Borah P. Media effects theory. In: The International Encyclopedia of Political Communication. Hoboken, New Jersey: John Wiley & Sons, Inc.; 2016. pp. 1-12. DOI: 10.1002/9781118541555.wbiepc156

[31] Toth A. Remodeling your practice. American Dental Association New Student Blog. 2015. Available from: https://newdentistblog.ada.org/remodeling-your-practice/

[32] Tung E, Lui Q. White Dental Spa Homepage. Available from: https://www.whitedentalsmile.com [Accessed: 16 July 2020]

[33] Haahr M, Haahr S. Random Integer Generator. Randomness and Integrity Services Ltd. Available from: random.org [Accessed: 16 July 2020]

[34] Statistical Atlas. Cedar Lake Ventures, Inc. Demographic data from U.S. Census Bureau. Available from: statisticalatlas.com [Accessed: 16 July 2020]

[35] Austin JL. In: Urmson JO, Sbisá M, editors. How To Do Things With Words. 2nd ed. Cambridge, MA: Harvard University Press; 1962

[36] Pape H. Pierce and Russel on proper names. Transactions of the Charles S. Peirce Society. 1982;**18**(Fall 4):339-348

[37] Professions, occupations, and business operations (225 ILCS 25/). Illinois Dental Practice Act. [Accessed: 04 June 2020]. Available from: http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1296&ChapterID=24

[38] Principles of Ethics & Code of Professional Conduct. The American Dental Association Council on Ethics, Bylaws and Judicial Affairs. 2018. [Accessed: 16 July 2020] at ada.org