



Performing Healing: Repetition, Frequency, and Meaning Response in a Chol Maya Ritual

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ABSTRACT

This article explores the role that repetition plays in symbolic healing through a close examination of the speech patterns and actions performed by a healer in a Chol Maya ritual aimed at curing a woman of kisiñ—the "embarrassment-sickness." The authors examine the repetition of speech patterns in the healing chant and the frequency with which other paralinguistic elements, such as taps, co-occur with the chant verses. The sound patterns generated during the ritual, specifically those created by the rhythmic tapping of the patient's body with a bough bouquet, are yet another form of repetition often overlooked in analyses of healing rituals, which have concentrated on other symbolic elements used by healers. It is argued that the repetition of phrases in parallel verses serves as metapragmatic commentary on the healing process as a restructuring of the patient's body, which has been unstructured by the disease.

KEYWORDS: ritual, performance, repetition, frequency, Chol Mayan

In their engagements to plumb ritual's dark symbolic or functional depths, to find in ritual more than meets the eye, anthropologists have,

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perhaps increasingly, tended to overlook ritual's surface, that which does meet the eye. Yet it is on its surfaces, in its form, that we may discern whatever may be peculiar to ritual. [Rappaport 1979, 174]

For decades, anthropological analyses of healing rituals have been inspired by Dow's (1986) model of symbolic healing, which suggests that patients' emotions must be linked to transactional symbols in order for them to be manipulated by healers. The crucial question thus addressed in the vast literature on symbolic healing is how the connection between the patient's emotions and the symbols used in healing rituals is achieved. Most symbols and elements in healing rituals have been widely discussed in the literature, for example, in the context of landscapes (Gesler 1992), metaphors (Kirmayer 1993, 2004), and sensorial elements (Nichter 2008). In particular, sensorial elements have been widely acknowledged as playing a central role in cementing the association between the symbols used in healing rituals and the patient's emotions (Nichter 2008). Recent research on symbolic healing has explored the connections between bodily processes and the cultural logic that explains such processes. For example, in their "mindbody" model of symbolic disease, Broom, Booth, and Schubert (2012) propose that there is a connection between internal body dynamics and external interpretations given to disease. The present research is framed in this tradition of studies in symbolic healing and aims to illustrate ethnographically the role that elements of repetition and frequency play in healing rituals.

The notion that repetition plays a fundamental role in ritual has such illustrious predecessors in the history of anthropological thought as Leach (1966), Bloch (1974), and Rappaport (1979). In linguistic anthropology, repetition has been signaled out as one of the defining elements of ritual language (Brody 1986; Du Bois 1986). Although the aspect of repetition as a formal feature of ritual performance has received a great deal of attention in the literature, one of its obvious counterparts, frequency—broadly defined as the number of times that some phenomenon is repeated per unit of time—has rarely been examined by students of ritual. Furthermore, to our knowledge, few studies have explored whether repetition and frequency may play a role in activating a "meaning response," which Moerman defines as "the psychological or physiological effects of meaning in the treatment of illness, and elsewhere" (2012, 197). In what follows, we turn to an ethnographic example of a Chol curing ceremony to illustrate the role that repetition and frequency play in symbolic healing.

The Chol are a population of swidden agriculturalists who live mostly in the state of Chiapas, Mexico, and speak a Western Maya language, which is a direct descendant of the language in which the great hieroglyphic inscriptions of the Classic period (250 A.D. – 900 A.D. were written. Although the

practice of slash-and-burn agriculture in community-owned lands *ejidos* is the main subsistence activity for most Chol families, some also cultivate coffee as a cash crop. From a sociolinguistic perspective, the majority of Chol territory is characterized by intense language contact among speakers of other Western Maya languages—Tzotzil and Tzeltal—as well as by stable diglossia and widespread bilingualism in Spanish and Maya languages.

In the case we are about to describe, the patient, a 30-year-old woman, is visited by a healer after suffering from violent hives and rashes that suddenly appeared on her skin. The healer diagnosed the patient with kisiñ (the "embarrassment-sickness"). Imberton Deneke (2006) describes local understandings of the disease as being produced by a dispute over some object, some kind of social tension, or an unresolved transgression. She argues that the ailment can be better understood as a "language" (Imberton Deneke 2006, 266) that conveys some of the social tensions originated in an impoverished society and that allows social actors to negotiate the outcomes of socially stressful situations. In what follows, we describe and analyze the speech and actions performed by a healer during a curing ceremony aimed at removing the kisiñ sickness from a patient. In particular, we will examine several forms of repetition and frequency that have been rarely addressed in the literature on symbolic healing: the parallelistic structure of the healing chant, the physical movements that are performed by the healer—especially how she taps the patient with a bunch of herbs—and the type of sound waves that are generated during the healing ritual. We argue that repetition and frequency play a role in cementing the unconscious association between symbols and emotions in the ritual context and, hence, in activating the "meaning response" (Moerman 2012) that eventually heals the patient.

A CHOL HEALING RITUAL

Tila (Chiapas, Mexico) is a municipal seat, largely inhabited by indigenous Chol Mayans, with a population of c. 5000. The ritual described in this article took place during a fieldwork stay in Tila in 2010. The patient was a 30-year-old woman whose skin suddenly broke out in bright red hives and rashes. Of the many types and forms of kisiñ, this was diagnosed as a case of kisiñ kixtyañob¹ ("embarrassment of people"), a particular form of kisiñ which is thought to be caused by someone in the community casting aspersions on the affected woman. The healer, a 38-year-old woman, performed a rameado, a well-known healing ritual, not only among the Chol but also in many other places in Latin America. In the ethnographic literature, it is also known as barrida (sweep), limpia (cleanse), ensalmo (incantation), or soplado (blown; Trotter and Chavira 1981; Pérez Chacón 1993; Aparicio Mena 2009).

The name rameado comes from the Spanish loanword *rama* (bough, twig), and it is descriptive of one of the main actions carried out by the healer during the ritual, which consists of rhythmically tapping the patient with a bunch of herbs that looks like a bough bouquet. Throughout the ceremony, the healer uses a bottle of sugarcane liquor, a set of herbs that peasant women in Chol communities sell in the early morning in Tila's central square—fennel, rue, mint, and basil, all of which emit an intense aroma distinctly sensed in the room—and a free-range egg.

The ritual consists of four parts—preparation, rameado, rolling of the egg, blowing of alcohol—and an "epilogue" consisting of the disposal of the egg used during the ritual, which takes place in the morning of the following day. During the preparation phase, the healer boils the fennel and gives the patient the infusion to drink. Afterward, the healer takes a sip of *lembal* (sugarcane liquor) and mixes some liquor with water in a bowl. As the patient remains seated in a chair located at the back door threshold of the house, the healer begins rhythmically tapping the patient's body with the large bunch of herbs, which had been thoroughly soaked in the water—alcohol mixture, thus initiating the rameado portion of the ritual. The taps start on the top of the head and gradually descend to the shoulders. The sound of the taps marks the rhythm as the healer begins (first softly and progressively more loudly) to sing the following chant³ (Table 1):

Shortly after beginning the ritual, the healer touches the patient's wrist and says wä'i baki añ ach'ujlel, mux alo'sañoñ, mux asu'beñ, mux ilok'el tel ("Here where your soul is, remove it [the sickness] for me, speak now, remove it now") while repeating over and over again the phrase koxtyä awälä, mux alo'sabeñoñ wa'li ("I thank you, remove it for me right now.") Touching the patient's wrist is an important part of the ritual, because the healer identifies it as the place where the soul resides. This form of pulsing is associated with the widespread belief in some Maya cultures that the blood is as an animated substance capable of speaking. In the Guatemalan Highlands, for example, the blood is thought to "send messages" to the shamans in ritual contexts and especially in curing ceremonies (Tedlock 1992). Among the neighboring Tzeltal Maya, the word ch'ulel, which means "soul," also represents the place where language, feelings, and memory originate (Pitarch 2010).

The rameado is repeated on the different parts of the body. The chant repeats phrases of similar meaning, especially the expressions *mux ilu' lok'el* ("may everything come out now") and *mux ilajmel* ("may it [the sickness] end now."). The singing goes on continuously throughout the rameado, which covers every part of the patient's body. The rameado alternates rhythmic tapping with sweeping the herbs over the body, as if cleansing the skin. After the head, shoulders, and upper limbs are swept and cleansed, the torso,

TABLE 1. INITIAL VERSES OF THE HEALING CHANT

Mux ikaje jiñi kisiñ mi ilajmel cha'añ chuki tyi isubeyety sajmä, chuki tyi ujtyi sajmä, mux ilajme tyi apusik'al, mux ilajme pejtye tyi ach'ujlel, mux ilu' lok'el, cha'añ ma'añ kisiñ mi yubiñ, cha'añ mux ilok'el jiñi saklel, mux ilajmel, mux iyochel weñbä, mux ityälel utsatybä. Tyi ochi tyi abälel, tyi apusik'al, tyi ajol, cha'añ mux ilu' lok'el jiñi machbä weñta oche sajmä, jiñi kixtyañob machku yom ik'elety, machku yom yilañety, Loketix majlel! Loketix tyi ityi', ivei, lokel mailel, chuki tyi isu'beyety, chuki tyi yälä sajmä, lajme kisiñ tyi apusik'al, lajme kisiñ tyi ajol, lajme kisiñ pejtyel. Mukbä ityälañety, mukbä iñiki su'beñety, lajme tyi apusik'al, lajme tyi ajol, lajme tyi apächälel, lajme pejtyel, cha'añ mi ilajme jiñi saklel ta'bä lok'i. ta'bä tyäliyety, ta'bä ñiki subeyety, lajmi kij.

May the embarrassment begin to disappear so that what they told you before, what happened before, may it end in your heart, may everything that is in your spirit end, may everything come out, so that she no longer feels the embarrassment-sickness. so that the itching goes away, may it be over, may what is good enter, may what is good come. It entered at night in your heart, in your head, may everything come out, what entered before is not of interest, the people who don't want to see you, who don't want to look at you May it go away! May it get out of her mouth, of her jaw, they leave as they get out what they told you, what they previously said, may the embarrassment-sickness in your heart end, may the embarrassment-sickness in your head end, may the embarrassment-sickness end everywhere. That one who bothered you, that one who spoke badly to you, may it end in your heart, may it end in your head, may it end in your skin, may it end everywhere, so that the itching ends the things that were drawn out, the things that came to you, the bad things they said to you, may it begin to disappear.

legs, and finally the feet follow. The healer stops frequently to soak the branches in the water-alcohol mixture as sweeping the body with them dries them out.

The second part of the ritual focuses on the symbolization of the disease. For a healing ritual to be effective, the healer must be able to link the notion of sickness with a symbol in the patient's mind. This process, known as symbolization (Keller 1998), creates a new meaning for the signifier—the symbol —which must signify in the affected patient's mind the disease in their body. However, not any symbol will suffice; it must be a symbol that the healer can easily manipulate. Once the symbol has been linked to, or signifies and "contains" the disease in the patient's mind, the healing process is accomplished through the destruction of the symbol. The entire ritual is oriented to achieve this symbolic link (Kapferer 2004). To manipulate the symbol is also to manipulate the disease, and its destruction results in healing (Kleinman and Sung 1979; Kleinman 1980). The symbol used to contain the disease in this Chol healing ritual is a free-range egg, which will be rolled over every part of the patient's body. The order in which the egg is rolled over the patient's body is similar to that of the rameado, starting with the head and ending with the feet. This process is repeated twice, as the healer makes sure that the egg has made contact with every part of the skin, which is dotted all over with leaves that have fallen off the aromatic herbs. Table 2 represents an excerpt of the chant intoned by the healer as she rolls the egg over the patient's body.

After rolling the egg, the healer fills her mouth with sugarcane alcohol, which she energetically expels over the patient's body. The name wujtyañ or soplado (blown) is also used metonymically to refer to this type of healing ritual because, when the healer expels alcohol, it seems as if she is "blowing" on the patient. The healer "blows" alcohol and vigorously sweeps the patient's body with the bundle of herbs. She tells the patient to stand up and continues sweeping the entire body repeatedly. As she sings, she pauses periodically to ingest and expel the alcohol on the patient's body. The healer first expels alcohol five times, then continues sweeping with the branches, and blows again four times. In this part of the ritual, the room becomes imbued with the scent given off by the combination of the soaked herbs and alcohol. The four herbs used in this ceremony—fennel, rue, mint, and basil—emit an intense aroma, and the constant tapping with the herbs intensifies the fragrance throughout the room, as the plants' leaves break off and are scattered along the floor and walls. As she blows on the patient, the healer intones the final verses of the healing chant, shown in Table 3.

After expelling the alcohol, the egg is broken and placed in a cup, where it will remain overnight. Here, the ritual ends, strictly speaking, with an approximate duration of half an hour. Although in certain Mesoamerican

TABLE 2. VERSES CO-OCCURRING WITH THE ROLLING OF THE EGG

Mi kaj ñuñsäbeñety jump'ej tyuñmuty, I am going to pass an egg all cha'añ mi klokbela over you, cha'añ mi klokbeñ so that we remove from you iliyi, mi kaje klokbeñ ili itikwälel jol, so that I remove from you pejtyel, cha'añ mux awäke itsäwañ this, I'm going to remove this heat from her head iliyi jol, iliyi pusik'al, everything, so that you give its mux its'äñañ, coolness, this head, mux ilajmel tyi ik'ux, mux ilajmel tyi isaklel ipächälel, this heart, chä'äch bajche' tyi isu'beyoñ sajmä tyi juliyoñ, it already cools down, weñ sakbi ipächälel. it no longer stings, [...] it no longer burns her skin, as she told me earlier Awokolik, utsatyix, ma'awäkbeñoñ iliyi tyuñmuty, when I arrived, mux alosbeñ jiñi itikwälel iyej, her skin stings a lot. itikwälel ity'añ $[\ldots]$ Please, may she be well now, mu'bi kixtyaño cha'añ utsatyix mi imajlel. give me this egg, remove the heat from [...] her jaw now, the heat of their words that people (are saying) so that she may go well now. $[\ldots]$

traditions, healers "read" the broken egg, in this case, the healer simply instructs the patient to throw the egg "down a drain or in a place where nobody will pass by" on the following day, possibly to avoid the risk of contagion. At dawn, the egg in the cup is discarded. A few hours after the patient disposed of the egg, her hives and rashes disappeared. Her body was absolutely clean, and there was no itching or inflammation.

PERFORMATIVITY, REPETITION, AND SYMBOLIC EFFICACY IN CHOL HEALING RITUALS

We now turn to examine two intertwined dimensions of the symbolic healing process—its performative aspect and the role played by repetition throughout the ritual. The notion that ritual speech has performative value dates from

TABLE 3. VERSES UTTERED BY THE HEALER WHILE BLOWING ON THE PATIENT

Mi kaj wujtyañ je'el tyi lembal cha'añ mux imajlel pejtye jiñi machbä utsaty machbä utsaty mux ilu' lok'el majlel wa'li. Wäleliyi, mux imajlel, mux ilok'el wälelivi kotyoty, wä'i baki añoñloñkbaj wä'i. [blows] Lok'emix majlel. Ta'ix muk lok'emix majlel wä'leliyi, tyojix mi kaj majlel, tyojix ma'xuk'tyäl, ma'ix ma'apensaliñ chuki mi apeñsaliñ, ma'ix ma'aña'tyañ chuki ma'añiki ña'tyañ, strong(er), ma'ix mi kaj tyi saklel jiñ apächälel. Mi tyi kaje tyi saklel jiñi apächälel, you think, mi kaj k'ele yäñbä bajche' mi kaj kts'äkañ. Peru jatyety, ma'añ mi kej käyä LakCh'ujtyaty, ma'añ mi kej käyä añetybä tyi iye'bal lum, to itch. cha'añ utsaty lu' troñel chuki muk'ety. Wokoxtyä awälä. But you,

I am also going to blow with alcohol so that everything that is not good leaves what is not good may it all leave now. Now, may it leave may it go away now from my house here where we are. It is already gone. Yes, it has already been removed, it is already going, starting to become straight, you (are) already straight and do not think anymore the things do not ponder anymore the bad things you ponder, your skin will no longer begin If your skin begins to itch, I will see another way in which I will heal you. do not leave her, Holy Father do not leave her, you who are under the earth, because all the work you do is good. Thank you.

the 1960s when many ethnographers of ritual adopted speech act theory. In his famous *How to Do Things with Words*, the philosopher of language John L. Austin (1962/1975) argued that the primary function of language was not necessarily to convey information; language is not simply descriptive of reality, Austin observed, but it can sometimes affect reality directly, not just indirectly, for example, by means of the information conveyed by a message. Austin's performatives are utterances in which "the uttering of the sentence is, or is a part of, the doing of an action, which . . . would not normally be

TABLE 4. REPETITIVE INVOCATION OF SUPERNATURAL ENTITIES IN THE HEALING CHANT

Jatyety añetybä tyi lum,
añetybä tyi pañimil,
añetybä tyi iye'bal cheñ,
añetybä tyi pañchañ,
mi klu' su'beñety,
mi klu' su'beñety,
cha'añ utsatyix ma'atyojisä'beñoñ,
cha'añ utsaty mi kajel tyi troñel,
utsaty mi kajel,
cha'añ ma'añ mi kij peñsaliñ,
cha'añ ma'añ mi kij iña'tyañ ibäj
chukoch tyi ju'li wä'i tyi laklumal,
iliyi, laklumal

You who are on earth,
You who are in the world,
You who are under the cave
You who are in heaven,
I speak to you all,
I speak to you all,
so that you make her straight
for me now,
so that she begins to work well,
may she begin (to be) well
so that she does not begin to think
so that she does not begin to
think herself
why she came here to our land,
this our land

described as 'just' saying something" (1975, 5). For example, in a marriage ceremony, "When I say, before the registrar of the altar, 'I do,' I am not reporting on marriage: I am indulging in it" (1975, 6). Naturally, Austin's notion of performativity soon appealed to ethnographers of ritual. Tambiah (1973/2014, 181) readily adopted Austin's performatives to explain the symbolic efficacy of ritual speech, pointing out that "ritual acts and magical rites are of the . . . 'performative' sort, which simply by virtue of being enacted (under the appropriate conditions) achieve a change of state, or do something effective." The mere uttering of the healing chant performed under felicitous conditions and in an appropriate context—the healing ceremony—can bring about healing. The words uttered by the healer do not merely describe, state, or report on the healing process: they do, in fact, heal.

It has been argued that the efficacy of healing rituals derives in part from their engagement with "the occult" (Rappaport 1979), which "differs from 'the patent' in that the patent can be known in the last resort by sensory experience, and it conforms to the regularities of material cause. The occult cannot be so known and does not so conform" (Rappaport 1979, 178). The occult in this ritual performance is represented by a set of supernatural entities that form part of the Chol mythical world and are repeatedly invoked by the healer. Table 4 represents an excerpt of the chant in which these supernatural entities are addressed by the healer; these invocations are repeated over and over in each part of the ritual. Enlisting the help of these supernatural entities is a

fundamental part of the ritual performance, which makes it more forceful and compelling.

Along with Lakeh'ujtvatv—"our Holy Father," one of the names used to refer to Jesus Christ-the healer addresses a set of supernatural entities that dwell in the sky—añetybä tyi pañchañ (you-[plural] who are in heaven)—referring both to Jesus Christ and saints of Roman Catholic origin. An important underworld entity is also invoked in the chant: jatyety añetybä tyi iye'bal lum, añetybä tyi iye'bal ch'eñ (you who dwell under the earth, you who dwell under the cave). Among the Chol, this figure is known as Witso' (Imberton Deneke 2009), Witz Ch'en (Morales Bermúdez 1999), or Don Juan (Josserand 2003). The periphrasis "you who dwell under the earth" is a term of avoidance,5 because direct mention of the Witso' is often avoided (López 2008). The Witso', or Lord of the Earth, is a powerful deity associated with hills and caves, and is highly feared by the Chol. It is a protagonist in tales of the loss or capture of the ch'ujlel (human soul) and can cause trouble if not offered candles, incense, food, and drink when sowing a cornfield, building a house, or if one intends to enter a cave. By invoking the supernatural figures that dwell in the sky and in the underworld, the healer ensures that she will have all the help possible to cure the patient and that none of these supernatural entities will be offended by not being included. She is careful in treating them with equal deference: Jatyety añetybä tyi lum, añetybä tyi pañimil, añetybä tyi iye'bal cheñ, añetybä tyi pañchañ, mi klu' su'beñety (You who are on the earth, you who are in the world, you who are under the cave, you who are in heaven, I speak to you all). The invocation of multiple supernatural entities is a common practice in healing rituals all over the world; in another example of a Tzeltal Maya healing ritual reported by Pitarch (2010), the shaman invokes Jesus Christ, the Virgin Mary, and a total of 22 saints.6

Beyond the perlocutionary force of the ritual performance, part of the symbolic efficacy of this healing ritual resides in its metapragmatic value. Healing is achieved by imposing order over a body that has been disordered by disease. A sick body is a disordered body either by the presence of something that should not be in the body or by the absence of something that should be in the body. In this case, the healer diagnosed that someone in the community had "given" or "sent" the disease; thus, the disorder was caused by the presence of an agent of disease in the patient's body. The disorder was physically manifest in the bright red rashes and spots that covered the patient's body. By using highly structured ritual speech, the healer imposes order over the sick, disordered, and unstructured body. The chant acts symbolically as a projection of the kind of order that the disordered body needs to be healthy again.

In Chol discourse, as in many other Mesoamerican oral traditions, repetition is a stylistic resource that serves to impose order on speech. It is also a fundamental characteristic of the most aesthetically pleasant speech. Although it is employed in a wide variety of speech genres, it is more prominent in formal genres, and especially in ritual speech. As illustrated on Tables 1-4, this healing chant employs multiple patterns of repetition, for example, sentences that begin with identical exhortative clauses mux ilajme tyi apusik'al, mux ilajme pejtye tyi ach'ujlel, mux ilu' lok'el (may the embarrassment in your heart end, may everything in your spirit end, may everything leave); repetitions of final subordinate clauses cha'añ ma'añ kisiñ mi yubiñ, cha'añ mux ilok'el jiñi saklel (so that she no longer feels embarrassment, so that the itch goes away now); or the repetitions of the same attributive adjective that qualifies the noun clauses weñ utsaty ipusik'al, weñ utsaty ipeñsal, weñ utsaty ich'ujlel (her heart is very good, her thought is very good, her spirit is very good). This stylistic use of repetition is also known as parallelism or parallel verse⁸ and is used in a wide variety of oral and written traditions around the world. The use of parallelism has been widely documented in Mesoamerica (Edmonson and Bricker 1985; León-Portilla 1985; Bright 1990; among others), and especially in the Mayan family of languages, for example, in Yucatec (Mudd 1979; Hanks 1984, 1988; Edmonson and Bricker 1985; Bricker 1989; Vapnarsky 2008), Quiche (Edmonson 1971; Norman 1980; Du Bois 1986; Tedlock 2000/2010), Tojolabal (Brody 1986), Ixil (Townsend 1979), Tzotzil (Gossen 1985, 1989; Haviland 1988, 2004; Bricker 1989, 2010), Tzeltal (Monod Becquelin 1987; Pitarch 2010), Ch'orti (Monod Becquelin and Becquey 2011), and Chol (Hopkins and Josserand 1990, 2005; Rodríguez 2014, 2016). Parallel verses are formed by inserting a synonym, a semantically related word, or an antonym in a repeated syntactic frame (Bricker 1989). Table 5 represents some examples of parallelism in the chant. Approximately

TABLE 5. EXAMPLES OF PARALLEL VERSES IN THE CHOL HEALING CHANT

Semantic couplet with a near-synonymous substitution bajche' mi kaj ñuñsañ iliyi oraj, How this time/moment is going to pass, bajche' ma'kaj ñuñsañ how a day is going to pass iliyi jump'ej k'iñ, Semantic triplet with word substitutions from the same lexical class chuki tyi ochi tyi apächälel, what entered your skin, chuki tyi ochi tyi abäktyal, what entered your flesh, chuki tyi ochi tyi ajol, what entered your head, Semantic couplet with an antonymous substitution añetybä tyi pañchañ, you who are in heaven, añetybä tyi lum, you who are on earth

95% of the verses in this healing chant are constructed with some kind of syntactic or semantic parallelism. This is the most formal, ordered, and structured genre of speech that can be produced in the Chol oral tradition.

The pronunciation of the chants is rhythmic, monotonous, and continuous. The sense of order is transmitted through the parallel verse, the repetitive tone, the cadence, the rhythm with which the words are pronounced, and the speech-accompanying taps with the herbs. Overall, the semantic content of the chant can be reduced to a few propositions: a description of the disease and how it "entered" the patient's body, an exhortation for the sickness to abandon the patient's body, and an invocation to a series of supernatural entities who will help the healer remove the disease. What really matters in this genre of ritual speech, more than the content of the message, is what the healer can accomplish stylistically with her chant as well as the richness of the parallel verses that can go on and on, filling almost half an hour of continuous and repetitive chanting, playing with only a few central ideas. The manner in which the chant is sung becomes the most important part of the message. Paraphrasing Marshall McLuhan's (1964) famous expression, one could say that the medium, in this case the chant and the way it is sung, becomes the true message.

THE FREQUENCY AND DISTRIBUTION OF TAPS DURING THE

As we have seen, the repetition of words and linguistic expressions—phrases and sentences—is a formal feature of this healing chant, which conveys a metamessage of order and structure to a body that has been unstructured by disease. In this section, we turn to another set of elements of repetition that mark the rhythm of speech, the taps made during the rameado with the bough bouquet of medicinal herbs on the patient's body. The systematic and precise tapping of the herbs dictates the rhythm of the chant's verses. Table 6

TABLE 6. SPEECH-ACCOMPANYING TAPS

/Cha'añ/ilok'el/jiñi saklel/	So that the itching goes away		
Mux ilajmel/	May it disappear		
Mux/iyocheñ/ weñbä/,	May what is good enter,		
mux i/tyälel/utsatybä/	May what is good come		
tyi ochi/tyi abälel/,	So that what entered at night		
tyi apusik'al/,	In your heart		
tyi ajol/,	In your soul		
/cha'añ mux ilu'/lok'el/	All of that may go away		

illustrates an excerpt of the chant with its accompanying taps, where each tap is represented by a slash (/).

An interesting aspect of the ritual performance is the frequency and distribution of these paralinguistic elements, the speech-accompanying taps. Because the taps mark the rhythm of the chant, calculating the number of taps that occur in the ritual per unit of time can give us information about the frequency of the taps and the rhythm of the co-occurring speech. To arrive at this calculation, we distinguished a total of 18 rameado sections. We defined a rameado section as one that begins with the taps and ends when the healer changes activity (for instance, soaks the herbs again, sweeps the body, places her hands on the patient, takes her pulse, or rolls the egg over her body). By calculating the number of taps per second in each of the sections, we obtained an average distribution of 1.06 taps per second, with a standard deviation of 0.18 seconds, as shown in Table 7.

An interesting note regarding the statistical distribution of the taps is its accumulated standard deviation (ASD). This indicator calculates, for each

TABLE 7. FREQUENCY AND DISTRIBUTION OF TAPS

Rameado section	Duration in seconds	Number of taps	Frequency (taps/s)	Accumulated standard deviation
1	31	43	1.39	
2	10	10	1.00	0.28
3	15	19	1.27	0.20
4	25	21	0.84	0.25
5	7	5	0.71	0.29
6	7	9	1.29	0.27
7	3	4	1.33	0.27
8	9	10	1.11	0.25
9	8	8	1.00	0.23
10	18	20	1.11	0.22
11	10	11	1.10	0.21
12	17	16	0.94	0.21
13	17	21	1.24	0.20
14	6	6	1.00	0.20
15	8	7	0.88	0.20
16	28	28	1.00	0.19
17	15	15	1.00	0.19
18	13	12	0.92	0.18

section, the deviation based on the distribution data up to the corresponding section. For example, the ASD of section 10 equals the standard deviation of the data from section 1 to section 10, inclusive of both. If the ASD continues decreasing as the ritual progresses, it means that the frequency of the taps—and therefore, the speed with which each clause of the text is recited—becomes increasingly more uniform, or more coherent, in physics terminology. In the case of this healing ritual, with the exception of an initial moment (between sections 3 and 5), the ASD tends to decrease. What this means is that the healer is somehow capable of making the repeated elements—the rameado taps and the rhythm of the speech with which they co-occur—approach uniformity. This is another way of projecting "ordered sound" or "structured sound" onto a body that has been disordered and unstructured by disease.

SYMBOLIC ASSOCIATIONS AND PHYSICAL FREQUENCIES

In this Chol ritual, the free-range egg is the central symbol linked to the disease. In the central part of the ritual, the healer rolls the egg over the patient's body, as if the egg was dragging out the disease, and at dawn, it is discarded. One of the central functions of the ritual is to link the egg to the notion of disease in the patient's subconscious mind, therefore transforming it into a malleable and easy to destroy element. The use of the egg has been reported to originate in European healing rituals and has been described in multiple documents and ethnographies since at least the 15th century (Arteaga 2010). In cases of kisiñ (embarrassment-sickness) among the Chol, it is common to find other elements that serve an identical role and are destroyed at the end of the ritual, such as handkerchiefs tied onto the patient during the healing prayers (Imberton Deneke 2006). This use of objects that symbolize ailments or beliefs in healing rituals is a worldwide practice. Its principles are based on the classic concept of sympathetic magic (Frazer 1920), and its therapeutic effects have frequently been recognized by Western medicine (Parker and Horton 1996; Roberts 1999; Hoogasian and Lijtmaer 2010). However, its efficacy is often explained by the phenomena of suggestion, catharsis, or the so-called placebo effect (Dein 2002). A further step in explaining the logic behind the healing process involves examining the symbolic connections established in the patient's mind, which trigger a meaning response (Moerman 2012).

Previous research has drawn attention to the role that sensorial elements play in cementing the association between the symbols used in healing rituals and the patient's emotions (Nichter 2008). In this healing ritual, all the elements incorporated into the process involved the five bodily senses; there

were elements linked to the sense of smell (the aroma of herbs and alcohol), hearing (the sound of the rameado taps and the chant), touch (contact between the herbs and body, between the alcohol that is expelled and the body, and between the egg and the body), taste (the infusion of herbs given to the patient at the beginning of the ritual), and sight (the herbs of vivid colors and the egg). All of these sensory links facilitate the patient's making of a connection not only between the egg and the disease but also between the ritual context and the healing process.

In addition to the role that sensory elements play in the process of symbolic healing, other elements were used throughout the ritual in order to subconsciously establish this symbolic link in the patient's mind: the chant, the rameado taps with aromatic herbs, and the expulsion or blowing of alcohol onto the patient's body. As previously noted, the chant has performative value; its uttering is not a mere description of the healing process, but rather, it *enacts* the healing process. It also serves as metapragmatic commentary on the disease as disorder and the healing process as order; the parallel verse, the cadence, and the repetitive rhythm transmit a sense of order and structure to a body that has been disordered and unstructured by the presence of disease. The speech that the healer projects toward the patient's body is not any kind of speech—it is the most highly structured type of speech that exists in the repertoire of Chol speech genres. This type of ritual language is strongly characterized by the use of repetition, semantic, and syntactic parallelism.

It has been shown in the preceding section that the repetitive chanting and tapping are carried out with clear consistency and uniformity throughout the ceremony. Is it possible that the rhythmic chanting and tapping may also have some kind of physical effect on the patient's body? In addition to having performative and metapragmatic value, it is obvious that these elements are a source of sound waves. A sound wave is a disturbance in the air set off by some kind of movement, in this case, the movement of the vocal folds of the healer and the tapping of the herbs against the patient's body. This means that the molecules of air surrounding the body of the patient are set off into vibration by the sound waves generated by the chanting and tapping, which tend to be somewhat more uniform than those characteristic of natural speech. Figure 1 illustrates a 15-second sample of the sound wave generated by the taps in the rameado. The waveform graph shows the movement of



FIGURE 1. WAVEFORM OF RAMEADO TAPS. [THIS FIGURE APPEARS IN COLOR IN THE ONLINE ISSUE.]

the air molecules that are being pushed toward and away from their resting position across time. The horizontal axis represents time in seconds; the central axis represents the resting position of the molecules; the purple line represents the movement of the molecules away from their resting position, back toward their resting position, and away from their resting position in the opposite direction.

In spite of the obvious differences, and with all due caution, an analogy may be drawn between this use of sound waves and frequency in the healing ritual and the ways in which Western biomedicine utilizes certain types of electromagnetic frequencies to heal,⁹ for example, in transcutaneous electrical nerve stimulation, which is used to treat some conditions like fibromyalgia and tendinitis, or in synchronized cardioversion, employed with certain types of cardiac arrhythmias. At the very least, it can be safely argued that the sound waves generated through the use of repetition, rhythm, and uniform frequency in the chanting and tapping portion of the ritual are different from the highly irregular sound waves characteristic of naturally occurring speech. However, subtle this effect may be, it would seem unwise to simply dismiss it as non existent.

CONCLUSION

In his Distinguished Lecture: Consciousness, "Symbolic Healing," and the Meaning Response, Moerman (2012) proposed that what is called the "placebo effect" is, in most cases, not a response to some sort of inert substance but, rather, to the words used and the meaning that they convey when a patient is administered a treatment. He comments on a groundbreaking study by Benedetti et al. (2003), who treated patients with four different drugs after surgery. Half of the patients were told that they were being treated and were administered the drugs overtly (with an injection), while the other half were not told and received the drugs covertly (through an intravenous line). The study showed that those who were treated overtly, those who were told and knew about the treatment, reported higher levels of pain relief than those who were not told they were being treated with those drugs. Reflecting on this experiment, Moerman keenly observed: "Placebos are inert, but language is not! And, in this case, since the event involves a conversation, it clearly has a cognitive, or conscious, dimension. Simply being aware that you are getting an analgesic enhances its effectiveness" (2012, 195). In this study, and in many others, Moerman observed that there is no "placebo effect" but, rather, a "meaning response," which he defined as "the psychological or physiological effects of meaning in the treatment of illness, and elsewhere" (2012, 197).

Notwithstanding, meaning can be conveyed in multiple ways: overtly, through the content of a message, or in more subtle ways, as part of a metamessage. In this article, we explored the role of repetition and frequency in activating a "meaning response" in a ritual performance. Our explanation of the role that repetition and frequency play in healing rituals goes beyond those that have been proposed by earlier scholarship, which include repetition as a way of overcoming communicative interference (Leach 1966), as a form of indexicality that signals status to those who participate in the ritual (Rappaport 1979) or as a form of quotation and deference (Bloch 2005). Focusing on the performative aspects of ritual,10 we have argued that the sound patterns generated during the ritual, specifically those created by the rhythmic tapping of the patient's body with the bough bouquet (and which give a name to the ritual itself, a rameado), are yet another form of repetition often overlooked in analyses of healing rituals that have concentrated on other symbolic elements used by healers. The frequency with which the taps are repeated tends to approach uniformity as the ritual progresses. More crucially, the repetition of phrases in parallel structures is not simply a stylistic resource; it also serves as metapragmatic commentary to the nature of disease as "un-structure," or "anti-structure," and the healing process as a reordering or restructuring of the body that was unstructured by the disease. The articulation of this metamessage is a fundamental part of the meaning response that healed the woman, who was suffering from kisiñ.

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NOTES

- 1 *Kixtiañob* is the plural form of *kixtiaño*, which is commonly translated as "people." This is a loanword from the Spanish noun *cristiano* (Christian), which was borrowed during the Spanish colonization and came to mean "person" by semantic extension.
- 2 This is done so the disease can leave not only the patient's body but also the house where the patient lives and possibly to avoid risk of contagion. This interpretation is in line with the instructions on how to discard the egg "down a drain or in a place where nobody will pass by."

3 For the sake of brevity, we have only included a sample of the chants that took place in the ritual, which lasted c. 30 minutes. This form of transcribing poetic texts from Maya oral literature follows the convention proposed by Tedlock (2000/2010).

- 4 The *ch'ulel* is just one of the many souls that make up the Tzeltal person; see Pitarch (2010) for a comprehensive description of the Tzeltal Maya notion of personhood.
- 5 On the avoidance of supernatural entities elsewhere in Mesoamerica see Vapnarsky and Le Guen (2011).
- 6 See also Hanks (1984, 1996) on the invocation of supernatural entities in healing and exorcism rituals in the Yucatan.
- 7 Sickness that results from the loss or capture of one of the multiple souls that make up the human being is quite common in some Maya cultures, especially among the neighboring Tzeltal Maya (Pitarch 2010). However, sickness resulting from the presence of some malevolent agent in the body is a widespread belief in Mesoamerica as well as in North America and northern Asia (Moerman 1979).
- 8 Other common names for parallelism are "couplets/triplets," "parallelistic units," "parallel verse," "parallel repetition," or "parallel speech," among others.
- 9 The authors do not wish to claim that sound waves are identical to electromagnetic waves. The former travel through a medium (e.g., air or liquid) and move longitudinally, while the latter can also travel through a vacuum and move transversally.
- 10 Although in this article we have focused the performative aspects of ritual, the cultural context in which the ritual takes place, memory and previous experiences may also play a role in the healing process.

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