

## **Spirits, Souls, and the Mediation of Plants in Moroccan Ethnography**

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**Abstract:** Moroccan ethnographic accounts are rich with descriptions of rituals and practices protecting and countering the effects of jealousy, passion and aspiration. Many of them include the mediation of plant resins, leaves, seeds, fruits, plant-dye inks for writing – plant parts mobilized to open or close communication between ill-intentioned others, human and non-human. In this article, I explore some of the writings about plants in Moroccan ethnography and my own work to understand the communicative ideologies shaping plant-human-nonhuman interaction. Plants are understudied in Moroccan ethnography and this work seeks to reframe their changing mediation from a semiotic perspective.

**Keywords:** Plants, Ethnography, Nonhuman-Human Mediation, Communicative Ideologies, Spirits, Morocco, Magic.

Colonial and post-colonial Moroccan ethnography has written extensively about the rituals and practices related to protecting and countering the international or unintentional effects of people's jealousy, passion, and aspiration. In these accounts, the effects are caused by *l'ayn*, a force created by a person's thoughts and desires that can act on another with a person intending to do harm. In the ethnographic descriptions, the negative force of these ill effects can be countered through talismans, music, dance, animal sacrifice, and food offerings. In addition, individuals can also seek out a specialist to help facilitate secret communication with another's *nafs* or soul through amulets and talismans that often include plant parts. These plant modalities (resins, leaves, seeds, fruits, roots, plant-dye inks used for writing Qur'anic verses) included in talismans and rituals are designed to triangulate the aid of unseen beings (*jinn*, *ghouls*, pious dead, God) to make another fall in love, find business success, cause harm to an enemy, enhance fertility or facilitate desire. Significantly, the mediation of plants often accompanies the medical treatments for communicative disorders associated with the ill-intentions of others, whether human through *l'ayn*, malevolent magic (*shūr*), or nonhuman actors connected to *lghā'ib*, the unknowable (*jinn*, *'afārīt*, *shayātīn*). Much has been written about the rituals, but far less about the plant mediation ideologies of Moroccans, despite the significant role that plants play in opening or closing communication between beings.

In this paper, I briefly describe the history of ethnography surrounding plants as mediators between spirits, souls, and intentions in Morocco. In particular, I examine the modality of plants observed and foregrounded in these accounts, and what that tells us about communication ideologies between *makhlūq 'Allāh* “Godly creations” in Morocco as recorded by observers and practitioners. Lastly, I introduce some of my own research on kinds of communicative sensorium ideologies shaping plant-based treatments to block evil communication by ill-intentioned spirits and humans in Fez among prophetic medicine practitioners and “traditional” herbalists. I do so to understand how perceptions of historical and communicative “baggage” are changing the kinds of semiotic mediations between plants, spirits, and humans in Fez.

### Plant Blindness

Plants are everywhere in Moroccan ethnographic accounts. They make guest appearances in lush descriptions of locales, livelihoods, repasts, rituals and practices but as backdrops to the actions and logics of humans. They are often not named; elided into general categories of “ecology,”<sup>1</sup> “grain,”<sup>2</sup> “agriculture,”<sup>3</sup> “vegetables,”<sup>4</sup> or “herbs;”<sup>5</sup> or mentioned as a partitioned plant portion used in ritual, such as consuming a date at a wedding.<sup>6</sup> Certainly Moroccans and their ethnographers valued rooted, growing plants, as attested by the ornamental, shade, aromatic, and fruiting trees appearing in so many ethnographic vignettes.<sup>7</sup> But most often, the plants are partitioned: cut, picked, dried, pressed, distilled plant modalities disconnected from the soil and photosynthetic growth.<sup>8</sup> Despite their backgrounding in Moroccan

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1. Rosen Lawrence, “Social Identity and Points of Attachment: Approaches to Social Organization,” in *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis*, eds. Clifford Geertz, Hildred Geertz, and Lawrence Rosen (Cambridge: University of Cambridge Press, 1979), 21.

2. Clifford Geertz, “Suq: The Bazaar Economy in Sefrou,” in *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis*, Clifford Geertz, Hildred Geertz, and Lawrence Rosen (Cambridge: University of Cambridge Press, 1979).

3. Kevin Dwyer, *Moroccan Dialogues: Anthropology in Question* (Prospect Heights, IL: Waveland Press, 1982), 7.

4. Rachel Newcomb, *Everyday Life in Global Morocco* (Bloomington IN: Indiana University Press, 2017), 129.

5. Stefania Pandolfo, *Knot of the Soul: Madness, Psychoanalysis, Islam* (Chicago IL: University of Chicago Press, 2018), 252.

6. Hildred Geertz, “The meaning of family ties,” In *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis* eds., Clifford Geertz, Hildred Geertz, and Lawrence Rosen, 315-91 (Cambridge: University of Cambridge Press, 1979), 367.

7. David Crawford, *Moroccan Households in the World Economy: Labor and Inequality in a Berber Village* (Baton Rouge, LA: Louisiana State University Press, 2008), 26-34.

8. Becky Schulthies, “Partitioning, Phytocommunicability, and Plant Pieties,” *Anthropology Today* 35, 2 (2019): 8-12.

ethnography, plants have been acting in the public sphere of Moroccan life all along. Perhaps we might understand, as Hartigan has argued about plants in Spanish public gardens, “while the plants themselves may not be construed as discoursing strangers, they were very much the focus of what such strangers discussed in public.”<sup>9</sup>

Moroccan ethnopharmacologist Jamal Bellakhdar, in the preface to his book *Le maghreb à travers ses plantes*, has described North Africans’ own plant blindness as a European intellectual hangover.<sup>10</sup> Plants have intertwined their logics into Maghrebi lives: the organic and nature are omnipresent from childhood stories that began with “*kān yā makān, fī qadīm az-zamān, leḥbaq wa soussān*,”<sup>11</sup> the low-hanging drupes eaten on the way to school; the myrtle bouquet left on the graves of grandparents; mint gathered in the countryside and dried for winter tea; the branches used in symbolic flagellation by a *zāwiya* member seeking to drive out the devils within.<sup>12</sup> This horticultural hermeneutic<sup>13</sup> found its way into one of the sayings of the former King Hassan II: Morocco is a tree with African roots, its trunk in the Arab-Muslim world, and branches in Europe. Plants in these accounts are not just metaphorical hangers for human logic or props for Moroccan actions, but have wound their way into contested mediation roles as I will describe. I suggest that we need to rethink how we understand the agency of plants – even as “disconnected” parts – in shaping communicative action. Their ubiquitous presence and yet ethnographic silence (in English-language writings) is an important gap in our anthropological thinking about Morocco.

### Assembling Plant-Human Sociality

In the opening of her ethnography about Moroccan spirit possession and women’s revisions of religious tradition, Rausch described a *shuwwāfa* (female ritual specialist treating unexplainable illness) burning *bkhūr* or incense to aid the summoning of a spirit medium.<sup>14</sup> As she mentioned later in the book, specific kinds of incense (along with dates, olives, henna designs, and colored clothing) facilitated connection with *jinn*, spirits who could

9. John Hartigan, “Plant publics: Multispecies relating in Spanish botanical gardens,” *Anthropological Quarterly* 88, 2 (2015): 487.

10. Jamal Bellakhdar, *Le Maghreb à travers ses plantes: Plantes, productions végétales et traditions au Maghreb* (Casablanca: Le Fennec, 2003).

11. This is a poetic storytelling form, liberally translated (which loses the rhythm of the Arabic) as “once upon a time, a long time ago, basil and iris...”

12. Bellakhdar, *Le Maghreb à travers ses plantes*, 12-13.

13. John Hartigan, *Aesop’s Anthropology: A Multispecies Approach* (Minneapolis, MN: University of Minnesota Press, 2014), 26.

14. Margaret Rausch, *Bodies, Boundaries and Spirit Possession: Moroccan Women and the Revision of Tradition* (Bielfeld: Transcript-Verlag, 2000), 13.

make sense of the unknown forces harming the *shuwwāfa*'s clients. The incense burned and the smoke emanating from the coals are plant partitions, resin compounds excreted by a plant when injured that harden and are later harvested for their aromatic properties. Incense has often been mentioned in relation to spirit possession in Moroccan ethnographic accounts,<sup>15</sup> but mostly as an aside. If an incense was named, it was never tied to a plant origin, or given much analytical coverage other than to mention its co-occurrence with human utterances or actions which were given center stage.

Anthropologists and others have been trying to expand our theorizing about sociality by taking analytical cues from non-human others, like plants. Turning some of these frames as questions, I ask, could rhizomic relationality,<sup>16</sup> companion species,<sup>17</sup> knotted entanglements,<sup>18</sup> sylvan thought,<sup>19</sup> or cultivated care<sup>20</sup> occur without rootedness or "living" form? How might a cut herb, herbal distillate or smoke from burning a plant resin aid or impede plant-human communicability? So many of the scholars writing in "the plant turn,"<sup>21</sup> focus on plant-human interactions in their rooted "living" environments. These kinds of sociality are cooperative or agonistic associations of living things. For example, Michael Marder in his work on greening consciousness, displaces the human and animal-based ideologies of life that shape exploitative relations with the environment by promoting phytocentrism, vegetal processes of "thinking" through nutritive, augmentative, and generative practices.<sup>22</sup> Yet his recentering of being as "communities of growth" from a plant perspective is still driven by living tropes. Can communities of growth include uprooted and processed plant parts? Or can only "growing" beings communicate? This evoking of European-based anthropomorphic properties and ideologies of

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15. Edward Westermarck, *Ritual and Belief in Morocco* (New York: University Books, 1968), 308-10; Vincent Crapanzano, *The Ḥamadsha: A Study in Moroccan Ethnopsychiatry* (Berkeley, CA: University of California Press, 1973), 145; Josep Lluís Mateo Dieste, *Health and Ritual in Morocco: Conceptions of the Body and Healing Practices* (Leiden, The Netherlands: Brill, 2012), 239; Emilio Spadola, *The Calls of Islam: Sufis, Islamists, and Mass Mediation in Urban Morocco* (Bloomington: Indiana University Press, 2014), 81.

16. Guattari Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 11.

17. Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago, IL: Prickly Paradigm Press, 2003).

18. Eben Kirksey, "Species: a Praxiographic Study," *Journal of the Royal Anthropological Institute* 21, 4 (2015): 775.

19. Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley: University of California Press, 2013).

20. John Hartigan, *Care of the Species: Races of Corn and the Science of Plant Biodiversity* (Minneapolis MN: University of Minnesota Press, 2017).

21. Natasha Myers, "Conversations on plant sensing," *Nature Culture* 3 (2015): 35-66.

22. Michael Marder, "For a Phytocentrism to come," *Environmental Philosophy* 11, 2 (2014): 237-52.

communication when writing about plant-human interaction is part of the difficulty in theorizing the communicative aspects of sociality. As I have outlined elsewhere, I am interested in the flexible interactional models that shape plant and Moroccan relationality that I call phytocommunicability.<sup>23</sup> How do we theorize communicability of “disconnected” plants whose relational abilities continue after their forms have lost their rooted, growing status? I view relationality as interaction and emergent sociality, a creating or rejecting of connectedness and exchange.<sup>24</sup> Moroccan plant-human relations could be about a shared piety in worshipping God.<sup>25</sup> Here I examine a plant-human connectedness that facilitates or blocks communication between beings (*jinn*, God, ill-intentioned humans). So how do we understand the kinds of communicability shaping sociality between plants and humans when the former has been cut, uprooted, dried, distilled, pressed, or burned? In other words, it is no longer “growing” through photosynthesis or germination.

I am reminded of debates explored by Sherine Hamdy in Egypt, where religious scholars, doctors, and patients differed on the signs that qualified a human being as “dead” in order to ethically harvest organs for transplantation.<sup>26</sup> In my work, I build on the concept of biocommunicability explored by Briggs and Hallin, in which ideologies about who can produce knowledge, how it circulates, and who should receive it shape health and medical news stories as much as the content itself.<sup>27</sup> It is with communicative ideologies in mind that I ask: what kinds of plant-human sociality exist when plants are disconnected from their wholeness (soil, root, stem, leaf, flower, fruit, photosynthesis) and not regenerated through transplantation/grafting but partitioned and processed? Could a dried leaf, an oil, a distillate residue, a dried and ground root participate in sociality, for whom, and how might Moroccans recognize and engage them? My interlocutors in Fez did not debate whether partitioned and processed plants were “dead” in order to interact with, exchange, or engage them, but they were deeply attuned to plant communicability. As I will explore in this article, Moroccans in Fez view phytocommunicability differently based on how they view the modality of its communicative

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23. Schulthies, “Partitioning, Phytocommunicability, and Plant Pieties.”

24. I see sociality not as a given to be identified, but a construct that emerges through interactions within specific participant configurations.

25. Schulthies, “Partitioning, Phytocommunicability, and Plant Pieties.”

26. Sherine Hamdy, *Our Bodies Belong to God: Organ Transplants, Islam, and the Struggle for Human Dignity in Egypt* (Berkeley CA: University of California Press, 2012); see also Margaret Lock, *Twice Dead: Organ transplants and the Reinvention of Death* (Berkeley CA: University of California Press, 2002).

27. Charles Briggs and Daniel C. Hallin, *Making Health Public: How News Coverage is Remaking Media, Medicine and Contemporary Life* (New York: Routledge, 2016).

channel. In some cases, a plant facilitated interaction but in other instances, the plant channel or communicative modality could be tainted and become a dangerous communicative parasite.<sup>28</sup>

Let me share a plant ecology and biochemical hermeneutic and then Moroccanize it. As horticulturists and plant scientists have known for a while, many disconnected plant cuttings, roots, and seeds have the capacity to remake, regrow, re-establish when connected with new contexts or interactants, whether soil, rootstock, tissue culture, or sunlight. In other words, in many species, plant partitions hold a potential wholeness of the organism. As described by European plant scientists in recent years, each plant is a modularly designed colony collective,<sup>29</sup> net ensembles of chemical selves,<sup>30</sup> a ‘swarming self of swarming swarms.’<sup>31</sup> The boundaries of entities have become less fixed: plants have primary and secondary chemical processes and symbiotic and agonistic relationships with other membraned forms that contribute to their lived experience.<sup>32</sup> When a plant enters a human digestive system, it shapes the gut microbiome that in turn affects human lived experience. Thus, environments and contexts shape the ways in which these plant assemblages emerge and become identified, and the organism ensembles shape the emergent environment. Scholars are reexamining the boundary work of categorizing plants as green grounded beings. Anthropologist Paul Kockelman recognized these processes as envorgansisms, interrelations of organisms, environments, interactional modalities, and ideological practices.<sup>33</sup>

One such Moroccan envorgansism is *sidra* (*Ziziphus lotus* or wild jujube).<sup>34</sup> *Sidra* is a medicinally and spiritually significant native fruit shrub found throughout North African and Iberian arid and semi-arid lands. Her marble-sized drupes, brambly stems, and deep roots draw all kinds of species into relations: low-lying undergrowth plants propagate more robustly under

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28. Paul Kockelman, “Biosemiosis, Technocognition, and Sociogenesis: Selection and significance in a multiverse of sieving and serendipity,” *Current Anthropology* 52, 5 (2011): 413; Bruno Latour, *Reassembling the Social: An Introduction to Social Life* (New York: Oxford University Press, 2005), 39; Michel Serres, *The Parasite* (Minneapolis MN: University of Minnesota Press, 2007 [1980]).

29. Stefano Mancuso and Alessandra Viola, *Brilliant Green: The Surprising History and Science of Plant Intelligence* (Washington, DC: Island Press, 2015), 36.

30. Robert Ulanowicz, *Ecology, the Ascendant Perspective* (New York: Columbia University Press, 1997), 47.

31. These scholars are writing from a theoretical biology known as organicism, and view plants as interacting layers of living developmental, evolutionary, genetic, and biochemical systems. Jesper Hoffmeyer, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs* (Chicago: University of Chicago Press, 2008), 49.

32. *Ibid.*, 25-28.

33. Kockelman, “Biosemiosis, Technocognition, and Sociogenesis,” 719.

34. According to Arabic conventions, this shrub is grammatically female, and I animate her thus throughout the text.

her protection;<sup>35</sup> ruminants graze on her leaves when they fall at the end of summer and avoid anything fenced by her thorny branches the rest of the year;<sup>36</sup> bees and ants are drawn to her yellow-green blossoms laden with nectar;<sup>37</sup> arid ecologists sing her drought and de-desertification root and leaf praises;<sup>38</sup> agronomists decry her pesky competitive and regenerative roots in winter rain-fed croplands;<sup>39</sup> phytochemists promote her chemically significant antimicrobial, antifungal, antioxidant, immunosuppressive, anti-inflammatory effects;<sup>40</sup> herbalists tout her fruit and leaves as a natural purification for kidney, urine, digestive issues and as a diabetic aid;<sup>41</sup> North African Muslims associate her with the *sidra* mentioned in the Qur'an as the tree separating earthly creation from God,<sup>42</sup> which the prophet Muhammad encountered on his ascension through various heavens to the garden of paradise. *Hadith* of the prophet Muhammed's life recount his counsel: use ground *sidra* leaves steeped in water to purify bodies for burial, exorcize spirits, and counter malevolent magic.

Despite all the multi-species relations coordinated by *sidra* as described in the previous paragraph, the most significant for the purposes of this article are the ways *sidra* blocks communication. While there is some debate about which plant species is the Qur'anic *sidra* separating earthly creation from God, and the strength of hadith surrounding prophetic mentions of *sidra*, the function seems uncontested. *sidra* served to block or facilitate communication between different classes of beings: prophets from God, humans from *jinn*,

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35. Reyes Tirado and Francisco I. Pugnaire, "Community Structure and Positive Interactions in Constraining Environments," *Oikos* 111, 3 (2005): 437-44.

36. S.K. Arndt, S.C. Clifford, and M. Popp, "Ziziphus – A Multipurpose Fruit Tree for Arid Regions," in *Sustainable Land Use in Deserts*, eds. Siegmund-W. Breckle, Maik Veste, Walter Wucherer (New York: Springer-Verlag, 2001).

37. Nisrin El Abidi and Salem El Shatshat, "The Effect of Microhabitat on Qualitative Characteristics of the Wild Jujube *Ziziphus lotus* (L.) Desf. Libyan Honey Type," *Journal of Chemical and Pharmaceutical Research* 8, 8 (2016): 1199-1202.

38. Mouna Maraghni, Mustafa Gorai, Mohamed Neffati, and Marie Christine Van Labeke, "Differential Responses to Drought Stress in Leaves and Roots of Wild Jujube, *Ziziphus lotus*," *Acta physiologiae plantarum* 36, 4 (2014): 945-53.

39. David L. Regehr and Azzedine El Brahli, "Wild Jujube (*Ziziphus lotus*) Control in Morocco," *Weed Technology* 9, 2 (1995): 326-30.

40. Chahid Benammar, Aziz Hichami, Akadiri Yessoufou, Anne-Marie Simonin, Meriem Belarbi, Hocine Allali, et Naim A. Khan, "Zizyphus lotus L. (Desf.) modulates antioxidant activity and human T-cell proliferation," *BMC Complementary and Alternative Medicine* 10, 1 (2010): 54-62; N. Rsaissi, El Kamili, B. Bencharki et L. Hillali, "Antimicrobial Activity of Fruits Extracts of the Wild Jujube '*Ziziphus Lotus* (L.) Desf,'" *International Journal of Scientific & Engineering Research* 4, 9 (2013): 1521-28.

41. Jamila Fakchich and Mostafa Elachouri, "Ethnobotanical Survey of Medicinal Plants used by People in Oriental Morocco to Manage Various Ailments," *Journal of Ethnopharmacology* 154, 1 (2014): 83.

42. *Quran*, Surat An-Najm 53: 14.

malevolent unseen forces (*al-ghā'ib*) from afflicted humans. As I will discuss below, the plant communicative form, whether leaf or rooted tree, mattered significantly in determining the efficaciousness of *sidra's* intervention between worlds. *Sadra* shrubs, blossoms, leaves, roots, drupes, biochemicals, and smoke, and other plant forms did different kinds of communicative work in shaping interactions between all kinds of entities.

### Treating Communicative Disorders

Many anthropologists have explored the social lives of plants that open or block communication between human and nonhuman interlocutors. Scholars of Amerindian communities in particular have recounted the role of coca, tobacco, sage, cedar, sweetgrass, ayuhuasca, salvia, peyote cactus, and datura as ritual facilitators, mediating communication with spirit beings.<sup>43</sup> Less attention has been paid to channel modality (plant smoke, breath across plants, ingested forms) as sensorium mediator across species and entities (jinn and humans). Sometimes the same plant has served to facilitate intra-human sociality as well as inter-being relatedness, such as when highland Runa in Peru engaged in *k'intu* ritual coca leaf chewing with each other and *pukuy* breath offerings and leaf burnings to powerful Andean earth beings.<sup>44</sup> In some cases, different plants were described to work in concert to open communicative channels with sacred beings. La Barre, writing first in 1938, described ritual use among relocated Native Americans in Oklahoma of sage rub for purification of person, cedar smoke as purification of the space, and chewed cedar to counter the bitterness of the ingested dried peyote cactus button. As important as modality is for facilitating communication, it is also important for thinking about blocking interaction.

Morocco is not well known anthropologically for plant-human sociality, or multisensory orchestration of multispecies relations, despite the rich record mentioned previously. In this section, I explore sensorium debates surrounding the proper modality of plant parts that Moroccan prophetic medicine practitioners and “traditional” herbalists prescribe in medical treatments for

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43. Catherine Allen, *The Hold Life Has: Coca and Cultural Identity in an Andean Community* (Washington DC: Smithsonian Institution, 2002); Marisol de la Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Chapel Hill NC: Duke University Press, 2015); Paja Faudree, “Tales from the Land of Magic Plants: Textual Ideologies and Fetishes of Indigeneity in Mexico’s Sierra Mazateca,” *Comparative Studies in Society and History* 57, 3 (2015): 838-69; Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Knowledge, Scientific Knowledge, and the Teachings of Plants* (Minneapolis, MN: Milkweed Press, 2013); Rosalyn LaPier, “Smudging: Plants, Purification and Prayer,” *Montana Naturalist* (2016): 16-17; Weston La Barre, *The Peyote Cult* (Shoe String Press, 1964 [1938]); Stacy Schaeffer and Peter T. Furst, eds. *People of the Peyote: Huichol Indian History, Religion, and Survival* (Albuquerque NM: University of New Mexico Press, 1996).

44. Allen, *The Hold Life Has*; de la Cadena, *Earth Beings*.

communicative disorders associated with the ill-intentions of others, whether human through *l'ayn* (the evil eye) and malevolent magic, or nonhuman (*jinn*, *'afārīt/ifrīt*, *shayātīn*). What kinds of communicative sensorium ideologies shape plant-based treatments to block evil communication by ill-intentioned spirits and humans in Fez? I examine the complexity of modality mediation when plant parts are channels that facilitate or block interaction. The modalities include the mediating role of plant resin smoke, plant leaf-infused breath, topical plant oil/leaf/seed/root mixtures/rubs, plant leaf/seed/root-infused teas, or other orally ingested mechanisms. Often the same plant can serve as a communicative channel but does different work depending on the parts/modality engaged. Modality becomes an issue in communicability when interlocutors orient to other elements attached to a channel, what Kockelman labeled potential channel parasites with problematic effects in connecting signers and interpreters and codes with interpretations.<sup>45</sup> Those channels rarely involve one element of a sensorium: incense smoke engages visual, olfactory, and haptic communicative receptors, as interlocutors wave the heated smoke toward the face, over the head, or throughout a room. When practitioners prescribe leaf/root/seed tea infusions, they know the plant modality will triangulate gustatory, olfactory, and haptic senses – to open one's soul to Godly submission, healing and transformation.<sup>46</sup> Plants are part of the multimodal orchestration of “proper” communication between beings, but Moroccan medical practitioners do not agree about which plant part/modality/sense is best.

There is a long Moroccan (and Mediterranean) tradition in protecting and countering against the intentional or unintentional effects of jealousy, passion, and aspiration. The evil eye can act on another without a person intending to do harm. However, individuals can also seek out a specialist to help facilitate secret communication with another's *nafs* or soul through amulets and talismans that often include plant parts (resins, leaves, seeds, roots, plant-dye inks used for writing Qur'anic verses) designed to triangulate the aid of unseen beings (*jinn*, *ghouls*, pious dead, God) to make another fall in love, find business success, cause harm to an enemy, and enhance fertility or desire. In Islamic cosmology, *jinn/afārīt/shayātīn* are beings God made of fire to worship him, though some do not, and create problems for humans because of their jealousy and/or passionate love. As described in several

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45. Paul Kockelman, “Enemies, Parasites, and Noise: How to take up Residence in a System without Becoming a Term in it,” *Journal of Linguistic Anthropology* 20, 2 (2010): 413.

46. Pandolfo, *Knot of the Soul*, 265.

ethnographies,<sup>47</sup> some Moroccan medical specialists known as *musha'wida*, manipulate these powerful emotions in *jinn* to tap their power for human ends. Some Moroccans call this dark magic and others *al-ghā'ib*, that which is imperceptible to human senses.<sup>48</sup> Religious medical specialists who are part of the Islamic reform movement (sometimes called *salafi* healers) recognize *jinn* and the evil eye, like most Muslims, along with their *musha'wida* counterparts, but decry any communication other than exorcism. As described by Pandolfo in her recent ethnography, the “lawful cure” of the Islamic reform movement doesn’t deny the presence of *jinn*, but avoids negotiating with them, refusing to share in their economy by placating through their favorite incense or negotiating with them. Qur’anic cures are based on submission to the power of God and the war against the *nafs*, in which *jinn* healing is not the end in itself but rather transformation of the soul and liquidation of harm.<sup>49</sup>

Both Salafi and other healers use plants in the mediation process to either block or facilitate communication, but have engaged different plant modalities and rationales for those intermediaries. *Musha'wida* employ plant-based inks, plant resin or seed incense/smoke to open a communicative channel, appease or entice nonhuman entities as part of the healing process. Salafi healers often prescribe plant leaves or seeds in tea infusions, hydrosols, topical rubs, or honey-based orally ingested mixtures. They do so precisely because of the history of plant incense and spirit channeling by *musha'wida* – the parasitic taint of problematic tradition leading Moroccans away from proper Islamic practice. They wish to disambiguate their approach from the troublesome sensorium parasites in other channels.

Plant forms among my Moroccan interlocutors were both intermediaries in Charles Sanders Peirce’s sense of seconds: serving as a communicative path between beings; and mediators in Peirce’s sense of thirds: shaping and embodying other path possibilities.<sup>50</sup> To quote Kockelman:

“An object (action or sign) considered as a means to an end (or infrastructure considered as a path to a destination) is a second (or intermediary), but insofar as it implies (embodies or indexes) other ends it might be diverted to serve, or indeed implies any way it may

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47. Deborah Kapchan, *Gender on the Market: Moroccan Women and the Revoicing of Tradition* (Philadelphia PA: University of Pennsylvania Press, 1996); Rausch, *Bodies, Boundaries and Spirit Possession*; Dieste, *Health and Ritual in Morocco*; Pandolfo, *Knot of the Soul*.

48. Spadola, *The Calls of Islam*; Rausch, *Bodies, Boundaries and Spirit Possession*.

49. Pandolfo, *Knot of the Soul*, 265.

50. Charles Sanders Peirce, “Logic as Semiotic: The Theory of Signs,” in *The Philosophical Writings of Peirce*, ed. Justus Buchler (New York: Dover Publications, 1955 [1897-1910]), 80.

fail to serve an end (whether original or diverted), it is a third (or mediator). The parasite is whatever inhabits such implications.”<sup>51</sup>

The plant modality (smoke, topical rub, infused tea) became a parasite, or communicative block/facilitator out of place, depending on the positions of observers and the phytocommunicative (plant-human interaction) models evoked.<sup>52</sup> Because of these mediation contentions, Moroccans have been recontextualizing channel modality ideologies related to wild jujube leaves (*sdar*, *Ziziphus lotus*), Syrian rue incense (*ḥarmel*, *Peganum harmala*), and bitter orange blossom water (*mazhar*, *Citrus aurantium* hydrosol/hydrolats)<sup>53</sup> in Fez Morocco, and using flexible phytocommunicability models to do so.

Since the mid-2000s, a division has arisen in Moroccan complementary medicine between *salafīs* (or what some Fassis call, *multazimīn* the religiously committed) and *ṭaqīdī* “traditional” herbalists who treat physical, emotional, mental, and social ailments. *Salafī* healers, known as prophetic medicine specialists, rely on descriptions in the Qur’an and hadith to both address illness etiologies and prescribe therapeutic treatments. They are most well-known for Islamic exorcism of jinn, known as (*al-ruqya al-shar‘iya*), though they are currently involved in all kinds of plant-based complementary medicine movements. The “traditional” herbalists can be broken down into those who sell medicinal herbs (*al-‘ashāb*) and those who engage in (*sha‘wada*) dark magic or (*shūr*) sorcery, evoking the power of jinn or other spirits to manipulate social or financial outcomes in their favor. Among those engaging *sha‘wada* are the female specialists *shuwāfa*, described by Rausch<sup>54</sup> and male *fqīh* (which, in clever shifter fashion, can also refer to a religious scholar trained in the practice of Islamic law).<sup>55</sup> These kinds of medical practitioners exist alongside biomedical doctors, nurses, midwives, pharmacists; though they are often sought out to treat functional and psychological illness that the latter are unable to address/cure. As accounted in previous ethnographic writings, Moroccans have been eclectic in their approaches to healing.<sup>56</sup> From

51. Paul Kockelman, “Enemies, Parasites, and Noise: How to take up Residence in a System without Becoming a Term in it,” *Journal of Linguistic Anthropology* 20, 2 (2010): 413.

52. Schulthies, “Partitioning, Phytocommunicability, and Plant Pieties.”

53. Hydrosols/hydrolats are the water precipitates created during a distillation process, often related to the making of essential oils. In the case of *mazhar*, the essential oils are not separated from the precipitates.

54. Rausch, *Bodies, Boundaries and Spirit Possession*.

55. Notice that male practitioners have the patina of religious respectability that female practitioners do not.

56. Ellen Amster, *Medicine and the Saints: Science, Islam, and the Colonial Encounter in Morocco 1877-1956* (Austin: University of Texas Press, 2012); Bernard Greenwood, “Cold or Spirits? Choice and Ambiguity in Morocco’s Pluralistic Medical System,” *Social Science & Medicine. Part B: Medical Anthropology* 15, 3 (1981): 219-35.

fevers to infertility, jinn possession to business acumen, it is not uncommon for family members to seek out an herbalist, *fqīh*, and doctor to triangulate the trouble and treatment.<sup>57</sup> Even as they do so, they may express disdain and doubt about the modes of accessing healing power. I heard a well-educated Fassi professional suffering from back pain tell his wife to, “go to *that fqīh*” to ask for help on his behalf, using the distal index “that” because of that healer’s troublesome associations with sorcery and “backward” practices.

### Cleansing Smoke or Water

Friday mornings in Fez often began with cooking. Even before breakfast made it to the table, some of the Moroccans I lived among had started preparing the Friday lunch – which in the Fez medina (old walled city) was one of the most important family events of the week. Among many Fassi families who had moved out of the medina, there was a sustained effort to retain Friday prayer and the extended lunch as a significant time socially, spiritually and physically. After starting the couscous or tagine, tidying the cushions lining the walls of the low-lying couches (*frāsh*), squeegeeing the floors with water, and bathing, some Fassi women I knew who had grown up in the medina would light a small piece of agarwood (*al-‘ūd al-qamarī*)<sup>58</sup> incense and walk through the house, using the resin smoke to purify the home for Friday prayer rituals. This process was similar, though slightly different, to the Native American sage *siiyaki* (smudging) purifications described by Rosayln LaPier for American Blackfeet<sup>59</sup> or Robin Kimmerer for sweetgrass and tobacco smudging among Potawatomie.<sup>60</sup> For LaPier and Kimmerer, smoke from sacred plants purified humans in preparation for their interactions with supernatural beings through prayer. In other words, it opened a communicative channel. In the Fassi case, the smoke from a resinous piece of *Aquilaria malaccensis* heartwood provided protection from harmful interactions, blocking some communicative channels (the evil eye, jinn) in order to make the proper channel (*ṣalāt*) more effective. Families who had been active in the *ḥaraka islāmiya*<sup>61</sup> (the Moroccan version of Islamic self-

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57. See Rausch, *Bodies, Boundaries and Spirit Possession*; Dieste, *Health and Ritual in Morocco*; Stefania Pandolfo, “The Thin Line of Modernity: Some Moroccan Debates on Subjectivity,” in *Questions of Modernity*, ed. Timothy Mitchell (Minneapolis, MN: University of Minnesota Press, 2000), Newcomb, *Everyday Life in Global Morocco*.

58. *Aquilaria* tree heartwood infected with *Phialophora parasitica* mold that develops a distinctive resin embedded fragrance when burned. Calling it moon wood may be an explicit index of its halalization.

59. LaPier, “Smudging: Plants, Purification and Prayer.”

60. Kimmerer, *Braiding Sweetgrass*.

61. Also influenced by religious satellite channels of the 2000s

education movements described by Saba Mahmood;<sup>62</sup> not to be confused with the Salafi political movements) were very careful about the kind of incense used in domestic purification rituals. Improper mediation channels were a very real concern. In fact, one might argue it was a central issue for Islamic movements. Renewed emphasis on direct connection with God was a way to disavow the problematic mediation of Sufi leaders, saints, and *baraka*-imbued objects. Most of the families I worked among would outwardly express distain for those engaging in religious or healing mediation involving anything other than God. At the same time, they couldn't dismiss the jinn or evil eye because it was both mentioned in the Qur'an and attested in family etiology narratives, their rationales for illness. The challenge was to include plant forms in an Islamically appropriate way.

Toufiq, one of the sons of this family clarified for me: "Good scents are part of Islamic practice. A well-known hadith that says the prophet Mohammed claimed three things he loved in this world: good smelling scents, his wives, and prayer. *Taib* is a religious concept, includes perfumes, good smelling incense and aromatic plants. Incense comes from plants, and is *khalq 'Allāh* created by God, and their spiritual essence (*rouḥ*) is important for their effectiveness. When my mom distills *mazhar* (bitter orange blossom water) it is a spiritual event. She burns some *l-'ūd qamārī* (agarwood), prays two *ruqya* (prayer sequences), and begins in the name of God (*bismillāh*). We spray/sprinkle *mazhar* on everyone during religious occasions as part of our obligation to present well to others [*mu'āmallāt*] and God [*'ibādāt*]. In fact, the Prophet's daughter was named Fatima Zahra, and referred to as *azzahrā'* (the blossomed/good smelling one). So *taib* is about being spiritual. Of course, we also changed the ways we used some natural plants (*al-'ashba aṭṭibiyya*). When I was growing up in the medina, my grandmother would grab me on Thursday evenings as I ran through the tiled courtyard of our *dār beldiyya* ("traditional" house). She would pass a handful of *shebba wa al-ḥarmel* (Syrian rue seeds mixed with alum) over my head and toss them into charcoal as she said: 'Eye of the mouse [one who sneaks], eye of the [ill-intentioned] neighbor, and the eye of the one who does not pray over the Prophet Muhammed, may he enter hell.' She would then have me step seven times over the incense smoke to protect me from harm. Now we know that these things are not part of Islam. We avoid *ḥarmel*, *jawzi*, and *ḥaṣalabān* (Syrian rue seeds, *Styrax bezoin* resin, frankincense and other strong smelling incense such as *serghina*) because they are associated with *sha'wada*

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62. Saba Mahmood, *Politics of Piety: The Islamic Revival and the Feminist Subject* (Princeton NJ: Princeton University Press, 2005).

(dark magic), and non-Islamic practices. But *mazhar* and ‘*oud* are good smells that prepare one’s mind and body for proper worship.”

In this account, Toufiq expressed some phytocommunicability (plant-human interaction) ideas aligned with Salafi healers, and others with Moroccan herbal traditions. It was not the plant distillates or resins themselves that were the channeling problem, but the indirect indexical bundling of plant partitions with other kinds of mediation practices in a complex orchestration of communication. The plant modality had become a mediator, not just an intermediator. Toufiq associated the smoke of charcoal-burned *ḥarmel* seeds with practices that foregrounded the mediating power of *jinn* rather than God. The smoke of ‘*oud* agarwood, however, could purify a space and mind for proper direct mediation with God through prayer. He placed *mazhar*, the orange blossom hydrosol, in the *ṭaib* category of religiously approved good smelling plant mediums. Sprinkling this plant oil distillate cooled the body (in Arab-Galenic humoral tradition), invigorated the mind (through olfactory cleansing), and opened the heart (through prophetic practice) for worship. It was a direct index of a Muslim’s religious obligations to interact well with others (*mu‘āmallāt* through *ṭaib*), and an indirect index of sacredness because of its historical presence at Moroccan wedding events, circumcisions, Thursday evening *lilas* (Quranic recitation social gatherings), and Sufi *zāwiya* shrine *dikhṛs* (transcendence rituals of repetitively reciting the names of God). I saw Toufiq’s mother administer *mazhar* for wounds, eye irritations, sunburns, and refreshing everyone’s mood after a hot day outside – part of the “cool” treatments of a Galenic humoral-inspired Arab-Islamic medicine. They viewed it as spiritual-medicinal, but also sought to carefully constrain its mediating powers.



Fig. 1: *ḥarmel* seeds



Fig. 2: ‘*ūd al qamārī*

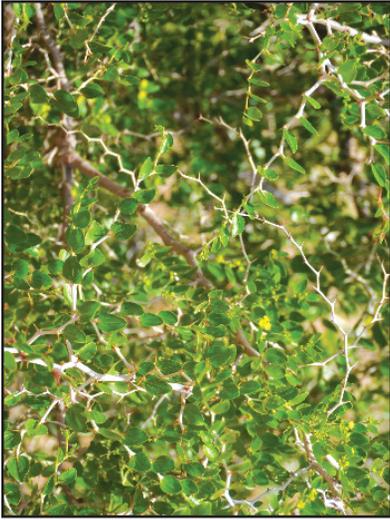


Fig. 3: *sidra*



Fig. 4: Orange blossom hydrosol

Toufiq's articulation of *mazhar* modality was a distancing reclamation of orange blossom water from its shrine and Sufi practices. Several Sufi groups in Fez would gather at shrines of saints on Thursday and Friday evenings to recite the Qur'an, mention the names of God (*dikhr*), or invoke the blessings of saints through collective petitionary prayers (*du'ā'*) that involved embodied speaking, listening, and repetitive movements. They would often have a large container of water sweetened with *mazhar* in the room, known as *assilqa* (the cord/connection). The *mazhar*-infused water was one of the plant partitions they mobilized to block evil communicative modes, and open bodies and souls to the healing of *baraka*, a mediating power generated by the good deeds of pious individuals now deceased, who were the heads of specific Sufi orders and *zāwiya* shrines. Participants would burn incense, add *mazhar* and sometimes *sidra* (*Ziziphus lotus*, wild jujube) leaves in the *assilqa* container, facilitating its acquisition of healing power through *ṭaib*. As they recited, the water would become imbued with the power of these sacred words, and afterward people would take this water home to drink or rub on their bodies as part of healing rituals. One would treat that *mazhar*-and-Qur'an-infused water as sacred. For example, it would never be used for ritual ablutions before prayer because it had taken on the name of God. It would be treated like a physical Qur'an: with great respect and piety. Salafi healing practitioners also use the idea of *ṭaib* to argue for the use of good scents such as *'ūd* in jinn exorcisms, and even *sidra*-infused water for healing psychosomatic ailments – but not *mazhar*-infused water of Sufi *zāwiyas* or *ḥarmel* seed incense. Those particular plant modalities were parasitically tainted by their Sufi spaces and practices. Salafis objected to *zawīya* shrine visitation, the mediation of saints

through petitionary prayers, and the use of *harmel* incense at *lilas*, trance events organized to placate jinn in those suffering under possession. Salafis might also create healing water through Qur'anic recitation and the addition of *sidr* leaves, but not via *dikhr* (recitations of the name of God) or *du'ā'* (petitionary prayers that included the mediation of saints), and not with *mazhar*. For Salafi healers, orange blossom water was an indirect index of Sufi saint mediation. Toufiq well knew of these associations, and made sure his plant mediation modalities were carefully situated between the lines.

*Sidra*, on the other hand, had a different contextual lineage and modality. Prophetic medicine practitioners prescribe ground *sidra* leaves steeped in water to purify bodies for burial, exorcize evil beings, and counter malevolent magic because it is mentioned in the Qur'an and *hadīth* (sayings and practices of the prophet Muhammad). According to these religious texts, *sidr* is the plant dividing the parts of heaven where humans dwell from that in which God dwells. It is a sacred plant that tradition says the jinn don't like; the taste of it is bitter to them. The more important issue for this article is which form is the most appropriate modality for maximizing human access to its healing properties. One of the Salafi healers cited all the rationales I mentioned previously when describing *sidra's* significance: studies of her antimicrobial properties, aid for managing diabetes, cited in prophetic hadith and the Qur'an. A key reason *sidra* leaves were a preferred plant medium for Salafi healers was precisely because its medicinal effects never come via burning and smoke – one of the most suspect of plant modalities because of its association with *jinn* or *baraka* saint intercession. Instead, *sidra* leaves are always infused in water and drunk, or ground and added to topical olive oil rub used on skin over an “afflicted” organ or body part affected by evil communication.

### Conclusion

As Moroccans mobilize the communicative properties of plants, they are deeply concerned about orchestrating the spiritual-material effects and social repercussions of specific sensory-spiritual modalities. Both healing practitioners and those engaging in ritual communicative acts bring flexible phytocommunicative ideologies to their worship and healing from illnesses caused by evil forms of communication. When a sensory medium, such as plant resin infused smoke or plant-dye inked amulets, partake of indirect indexical taint in orchestrating improper forms of communication, Moroccans engage in a great deal of semiotic labor to differentiate their phytocommunicative practices. The appropriate smell, taste, sight and feel

of plant-facilitated therapeutic piety in Morocco is currently being contested on modality grounds. The partitioned plants continue to shape interactions between beings in Morocco.

### Bibliography

- Allen, Catherine. *The Hold Life Has: Coca and Cultural Identity in an Andean Community*. Washington DC: Smithsonian Institution, 2002.
- Amster, Ellen. *Medicine and the Saints: Science, Islam, and the Colonial Encounter in Morocco 1877-1956*. Austin: University of Texas Press, 2012.
- Arndt, S.K., S.C. Clifford, and M. Popp. "Ziziphus—A Multipurpose Fruit Tree for Arid Regions." In *Sustainable Land Use in Deserts*, eds. Siegmund-W. Breckle, Maik Veste, Walter Wucherer, 388-99. New York: Springer-Verlag, 2001.
- Bellakhdar, Jamal. *Le Maghreb à travers ses plantes: Plantes, productions végétales et traditions au Maghreb*. Casablanca: Le Fennec, 2003.
- Benammar, Chahid, Aziz Hichami, Akadiri Yessoufou, Anne-Marie Simonin, Meriem Belarbi, Hocine Allali, et Naim A. Khan. "Zizyphus lotus L. (Desf.) modulates antioxidant activity and human T-cell proliferation." *BMC complementary and alternative medicine* 10, 1 (2010): 54-62.
- Briggs, Charles and Daniel C. Hallin. *Making Health Public: How News Coverage is Remaking Media, Medicine and Contemporary Life*. New York: Routledge, 2016.
- Crapanzano, Vincent. *The Hamadsha: A Study in Moroccan Ethnopsychiatry*. Berkeley CA: University of California Press, 1973.
- Crawford, David. *Moroccan Households in the World Economy: Labor and Inequality in a Berber Village*. Baton Rouge, LA: Louisiana State University Press, 2008.
- de la Cadena, Marisol. *Earth Beings: Ecologies of Practice across Andean Worlds*. Chapel Hill NC: Duke University Press, 2015.
- Deleuze, Guattari, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi. Minneapolis: University of Minnesota Press, 1987.
- Dieste, Josep Lluís Mateo. *Health and Ritual in Morocco: Conceptions of the Body and Healing Practices*. Leiden: Leiden, Brill, 2012.
- Dwyer, Kevin. *Moroccan Dialogues: Anthropology in Question*. Prospect Heights, IL: Waveland Press, 1982.
- El Abidi, Nisrin and Salem El Shatshat. "The Effect of Microhabitat on Qualitative Characteristics of the Wild Jujube Ziziphus lotus (L.) Desf. Libyan Honey Type." *Journal of Chemical and Pharmaceutical Research* 8, 8 (2016): 1199-1202.
- Fakchich, Jamila and Mostafa Elachouri. "Ethnobotanical Survey of Medicinal Plants used by People in Oriental Morocco to Manage Various Ailments." *Journal of Ethnopharmacology* 154, 1 (2014): 76-87.
- Faudree, Paja. "Tales from the Land of Magic Plants: Textual Ideologies and Fetishes of Indigeneity in Mexico's Sierra Mazateca." *Comparative Studies in Society and History* 57, 3 (2015): 838-69.
- Geertz, Clifford. "Suq: The Bazaar Economy in Sefrou." In *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis*, eds. Clifford Geertz, Hildred Geertz, and Lawrence Rosen, 123-313. Cambridge: University of Cambridge Press, 1979.
- \_\_\_\_\_. "The meaning of family ties." In *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis*, eds. Clifford Geertz, Hildred Geertz, and Lawrence Rosen, 315-91. Cambridge: University of Cambridge Press, 1979.

- Greenwood, Bernard. "Cold or Spirits? Choice and Ambiguity in Morocco's Pluralistic Medical System." *Social Science & Medicine. Part B: Medical Anthropology* 15, 3 (1981): 219-35.
- Haraway, Donna. *The Companion Species Manifesto: Dogs, people, and significant otherness*. Chicago, IL: Prickly Paradigm Press, 2003.
- Hartigan, John. "Plant Publics: Multispecies Relating in Spanish Botanical Gardens." *Anthropological Quarterly* 88, 2 (2015): 481-507.
- \_\_\_\_\_. *Aesop's Anthropology: A Multispecies Approach*. Minneapolis, MN: University of Minnesota Press, 2014.
- Hartigan Jr, John. *Care of the Species: Races of Corn and the Science of Plant Biodiversity*. Minneapolis MN: University of Minnesota Press, 2017.
- Hamdy, Sherine. *Our Bodies Belong to God: Organ Transplants, Islam, and the Struggle for Human Dignity in Egypt*. Berkeley CA: University of California Press, 2012.
- Hoffmeyer, Jesper. *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*. Chicago: University of Chicago Press, 2008.
- Kapchan, Deborah. *Gender on the Market: Moroccan Women and the Revoicing of Tradition*. Philadelphia PA: University of Pennsylvania Press, 1996.
- Kimmerer, Robin Wall. *Braiding Sweetgrass: Indigenous Knowledge, Scientific Knowledge, and the Teachings of Plants*. Minneapolis, MN: Milkweed Press, 2013.
- Kirksey, Eben. "Species: a praxiographic study." *Journal of the Royal Anthropological Institute* 21, 4 (2015): 758-80.
- Kockelman, Paul. "Biosemiosis, Technocognition, and Sociogenesis: Selection and significance in a multiverse of sieving and serendipity." *Current Anthropology* 52, 5 (2011): 711-39.
- \_\_\_\_\_. "Enemies, Parasites, and Noise: How to take up Residence in a System without Becoming a Term in it." *Journal of Linguistic Anthropology* 20, 2 (2010): 406-21.
- Kohn, Eduardo. *How Forests Think: Toward an Anthropology Beyond the Human*. Berkeley: University of California Press, 2013.
- La Barre, Weston. *The Peyote Cult*. Shoe String Press, 1964 [1938].
- LaPier, Rosalyn. "Smudging: Plants, Purification and Prayer." *Montana Naturalist* (2016): 16-17.
- Latour, Bruno. *Reassembling the Social: An Introduction to Social Life*. New York: Oxford University Press, 2005.
- Lock, Margaret. *Twice Dead: Organ transplants and the Reinvention of Death*. Berkeley CA: University of California Press, 2002.
- Mahmood, Saba. *Politics of Piety: The Islamic Revival and the Feminist Subject*. Princeton NJ: Princeton University Press, 2005.
- Mancuso, Stefano, and Alessandra Viola. *Brilliant Green: The Surprising History and Science of Plant Intelligence*. Washington, DC: Island Press, 2015.
- Maraghni, Mouna, Mustafa Gorai, Mohamed Neffati, and Marie Christine Van Labeke. "Differential Responses to Drought Stress in Leaves and Roots of Wild Jujube, *Ziziphus lotus*." *Acta physiologiae plantarum* 36, 4 (2014): 945-53.
- Marder, Michael. "For a Phytocentrism to come." *Environmental Philosophy* 11, 2 (2014): 237-52.
- Myers, Natasha. "Conversations on plant sensing." *Nature Culture* 3 (2015): 35-66.
- Newcomb, Rachel. *Everyday Life in Global Morocco*. Bloomington IN: Indiana University Press, 2017.
- Pandolfo, Stefania. "The Thin Line of Modernity: Some Moroccan Debates on Subjectivity." In *Questions of Modernity*, ed. Timothy Mitchell, 115-47. Minneapolis, MN: University of Minnesota Press, 2000.

- \_\_\_\_\_. *Knot of the Soul: Madness, Psychoanalysis, Islam*. Chicago IL: University of Chicago Press, 2018.
- Peirce, Charles Sanders. "Logic as Semiotic: The Theory of Signs." In *The Philosophical Writings of Peirce*, ed. Justus Buchler. New York: Dover Publications, 1955 [1897-1910].
- Rausch, Margaret. *Bodies, Boundaries and Spirit Possession: Moroccan Women and the Revision of Tradition*. Bielfeld: Transcript-Verlag, 2000.
- Regehr, David L. and Azzedine El Brahli. "Wild Jujube (*Ziziphus lotus*) Control in Morocco." *Weed Technology* 9, 2 (1995): 326-30.
- Rosen, Lawrence. "Social Identity and Points of Attachment: Approaches to Social Organization." In *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis*, eds. Clifford Geertz, Hildred Geertz, and Lawrence Rosen, 19-122. Cambridge: University of Cambridge Press, 1979.
- Rsaissi, N., El Kamili, B. Bencharki et L. Hillali. "Antimicrobial Activity of Fruits Extracts of the Wild Jujube '*Ziziphus Lotus* (L.) Desf.'" *International Journal of Scientific & Engineering Research* 4, 9 (2013): 1521-28.
- Schaeffer, Stacy and Peter T. Furst, eds. *People of the Peyote: Huichol Indian History, Religion, and Survival*. Albuquerque NM: University of New Mexico Press, 1996.
- Schulthies, Becky. "Partitioning, Phytocommunicability, and Plant Pieties." *Anthropology Today* 35, 2 (2019): 8-12.
- Serres, Michel. *The Parasite*. Minneapolis MN: University of Minnesota Press, 2007 [1980].
- Spadola, Emilio. *The Calls of Islam: Sufis, Islamists, and Mass Mediation in Urban Morocco*. Bloomington: Indiana University Press, 2014.
- Tirado, Reyes and Francisco I. Pugnaire. "Community Structure and Positive Interactions in Constraining Environments." *Oikos* 111, 3 (2005): 437-44.
- Ulanowicz, Robert. *Ecology, the Ascendant Perspective*. New York: Columbia University Press, 1997.
- Westermarck, Edward. *Ritual and Belief in Morocco*. New York: University Books, 1968.

### علاقات الأرواح والنفوس باستخدام وساطة النباتات في الإثنوغرافيا المغربية

ملخص: تعتبر الروايات الإثنوغرافية المغربية غنية بأوصاف الطقوس والممارسات التي تحمي تأثيرات الغيرة والعاطفة والطموح بغية التصدي لها. وتشتمل العديد منها على وساطة راتنجات النبات والأوراق والبذور والفواكه وأحبار صبغ النبات للكتابة - أجزاء النبات التي يتم تعبئتها لفتح أو إغلاق الاتصال بين الآخرين ذوي النوايا السيئة، البشر منهم وغير البشر. وأقترح في هذا المقال، استكشاف بعض الكتابات حول النباتات في الإثنوغرافيا المغربية، مع الحديث عن أعمالها الخاصة لفهم الإيديولوجيات التواصلية التي تشكل التفاعل بين النبات والإنسان في علاقة ما هو غير بشري. ويبدو لي أن دراسة النباتات في الإثنوغرافيا المغربية لا تزال ضعيفة، ويحاول هذا العمل إعادة تأطير وساطتها المتغيرة من منظور سيميائي.

الكلمات المفتاحية: النباتات، الإثنوغرافيا، الوساطة غير البشرية، الإيديولوجيات التواصلية، الأرواح، المغرب، السحر.

**Esprits, âmes et médiation des plantes dans l'ethnographie marocaine.**

**Résumé:** Les récits ethnographiques marocains sont riches en descriptions de rituels et de pratiques protégeant et contrant les effets de la jalousie, de la passion et de l'aspiration. Beaucoup d'entre eux incluent la médiation des résines végétales, des feuilles, des graines, des fruits, des encres végétales pour l'écriture – des parties de plantes mobilisées pour ouvrir ou fermer la communication entre autres mal intentionnés, humains et non humains. Dans cet article, j'explore certains des écrits sur les plantes dans l'ethnographie marocaine et mon propre travail pour comprendre les idéologies de communication qui façonnent l'interaction Plante/homme/non-humain. Les plantes sont peu étudiées en ethnographie marocaine et ce travail cherche à recadrer leur médiation changeante dans une perspective sémiotique.

**Mots-clés:** Plantes, ethnographie, médiation non humaine-humaine, idéologies communicatives, esprits, Maroc, magie.