

**Kombucha Culture: An ethnographic approach to understanding the practice of
home-brew kombucha in San Marcos, Texas**

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Abstract

Kombucha, a traditional fermented tea beverage touted for its numerous health benefits, has seen a dramatic rise in popularity over the last fifteen years. Once exclusively found in specialty health shops and only known by a small number of Americans, now numerous commercial brands of bottled kombucha are widely available. Interestingly, even as the fermented drink has become more accessible to the public, specialized groups are increasingly likely to brew it themselves. Following the trend toward home production and brewing of many kinds of edibles and crafts (Caruso 2015), homebrewing kombucha is now practiced across the nation (Crum 2016). As enthusiasm for consuming and brewing kombucha – process which takes continued, dedicated effort – has spread, small towns like San Marcos in Central Texas have not been immune. This study explores the “kombucha culture” of San Marcos, asking: What is it about this effervescent drink that compels people to become so devoted to their home-brew practice?

As noted, even as an increasing number of people now consume kombucha regularly and practice brewing the beverage at home, there has been very little formal exploration on what could be driving this phenomenon. My research project aims to understand the unseen motivations of people who practice brewing kombucha in their own homes within the San Marcos area. This study utilizes an ethnographic approach and qualitative methods to reveal the underlying influences and inspirations that encourage a kombucha habit. Techniques utilized in this study include interviews with individuals and couples who brew at home, multiple focus groups with networks of home brewers, and participant-observation of and within this kombucha-enthused community. As a home-brewer myself, I bring a unique “insider” perspective to the study, as well as being able to leverage my own access to the homebrewer network to achieve study aims.

This inquiry reveals three key themes revolving around the commitment to kombucha: the multi-faceted health benefits, an engagement with sustainable food systems and environmental concern, and a sense of community and group inclusion. Brewers construct networks of exchange between each other, swapping physical and cultural material that fosters trust, friendship, and bonding. The shared beliefs, collective values, and common practices of kombucha home-brewers culminates in a particular sociocultural constructing, which I term *Kombucha Culture*. Kombucha Culture goes beyond

providing an explanation of why people are brewing 'buch in San Marcos; it is the embodiment of ideals about how food, the environment, and community should work together at the local scale in a sustainable system to ensure health and wellbeing for all. Studying kombucha brewing practices is one way to better understand how to work towards these universal goals.

Keywords *alternative food systems, fermentation, kombucha, qualitative methods, sense of community*

Introduction

Kombucha, an effervescent fermented tea beverage, has experienced tremendous growth in popularity in the United States over the last fifteen years (Katz 2012). Self-titled ‘fermentation revivalist’ and renowned expert on all things fermented, Sandor Katz proclaims, “No other ferment even approaches kombucha in terms of its sudden dramatic popularity.” According to a recent research study, the international market for kombucha is projected to increase from \$600 million dollars in 2015 to \$1.8 billion dollars in 2020 (PR Newswire 2015). Bottled and sold as a health drink, kombucha is promoted for its refreshing qualities and nourishing health benefits. Although this beverage has roots that can be traced back thousands of years, as recently as the mid-1990’s most Americans were not familiar with the drink. Hardly any bottled kombucha was sold in the United States prior to the boom; it could only be found in select specialty health food stores and from those few people who were brewing their own tea at home.

Today in Central Texas kombucha seems to be bubbling up everywhere: major supermarket chains, gas stations and corner stores, the farmer’s markets, coffee shops, restaurants, bars, and

increasingly in residential home kitchens. There are now numerous commercial brands to choose from such as GT’s, Heath-Ade, and Live Kombucha Soda that have a nationwide market, in addition to multiple emerging local brands such as Buddha’s Brew, Kosmic Kombucha, and Wonder-Pilz being sold in and

around Austin and San Marcos, Texas at specialty



Figure 2. An array of bottled kombucha brands on shelves
Natural Grocers in San Antonio, TX Feb. 2017

shops and farmers markets. Why has this fizzy tea beverage become so trendy? And, more importantly to this study, why are so many people deciding to take on the practice of brewing their own kombucha at home? As a resident of Central Texas, I noticed this sweeping trend of home brewing kombucha because, as I looked around me, I found many of my friends and acquaintances in San Marcos, Texas were brewing this fermented beverage at home. Indeed, I even took up the practice myself. There have been many reports published chronicling the increase in corporate kombucha sales (PR Newswire 2015; Carr 2014) and countless testimonies exist which tout kombucha's health benefits (Frank 1995; Crum and LaGory 2016), but there is little to nothing chronicling what motivates people to brew this beverage at home in their own communities. Thus, this directed research project employs an ethnographic methodological approach to explore what is driving this developing phenomenon at the local scale and leverages my own connections to the homebrew culture in San Marcos. Through interviews, focus groups, and purposefully participating and observing kombucha brewing practice, this research aims to uncover the shared values, motivations and inspirations of kombucha culture and demonstrate the community-building possibilities of this practice.

Background

Cloudy history of kombucha

Kombucha is both a global and historical beverage that has been brewed by many different communities throughout the world and across different eras of history. The precise origin of kombucha is contested, although the general agreement is that kombucha has its roots in the Far East. According to Hannah Crum and Alex LaGory, authors of the popular website Kombucha Kamp and, arguably the most comprehensive, contemporary resource on kombucha brewing, *The Big Book of Kombucha*, kombucha tea originated in the Manchurian region of NE China around 220 BC. This “tea of immortality” was rumored to be reserved exclusively for the consumption of Emperor Qin Shi Huang. The tea was not commonly consumed by the general population until much later; written records reference kombucha consumption for the masses during the Tang Chinese dynasty which spanned from 618 to 907 CE. Still other stories claim kombucha began in Japan with the legend of Dr. Kombu treating the Japanese emperor with the beverage around 415 CE (Frank 1995). As is the case with many folk recipes and remedies, the exact history or precise geography of kombucha can be difficult to pin down. What is more important than debating exactly where and when kombucha came from is to appreciate

traditional lore and legends surrounding this beverage and recognize the long-standing relationship humans have had with kombucha across space and time. As physical materials were exchanged along ancient networks of trade routes, so were ideological beliefs and cultural traditions (Pryor 1996). Kombucha traversed the Silk Road, spreading across



Figure 2. Map of Silk Road extent. Kombucha carried over the red routes, westbound.

networks throughout Mongolia, Russia, India, and even reaching as far as the Middle East, likely in the flasks and canteens of traveling merchants (Hobbs 1995).

After the Russo-Japanese War, Russian soldiers returning home brought kombucha with them. Eventually, kombucha became popular and quite common in Russia, spreading first to Germany, breaking into the rest of Eastern Europe by 1852. The first documented scientific experiments concerning kombucha were carried out by curious German and Russians in the latter half of the 19th century. Russian ethnographer and student of Tibetan medicine Dr. Nikolay Kirilov was the first to publish on the health benefits of drinking kombucha (Kaufmann 2013). This painting below, done by

Philipp Kubarev in

1918, depicts

kombucha fermenting

on the windowsill as a

part of everyday

Russian life.

Up until the second world war, and for the following couple of decades as well,

hundreds of scientific research papers were

published, predominately

by Russian and German

doctors and scientists, documenting kombucha as treatment for a variety of ailments (Crum and LaGory 2016). During the 1950's kombucha had a dramatic, albeit short-lived, boost in popularity with Italians.



Figure 3. Russian artist Philipp Kubarev depicts a jar of kombucha brewing on a windowsill in this painting titled Morning, done in 1918.

Soldiers stationed in Russia during WWII returned home with the “Chinese fungus” as kombucha was known, and an odd, but trendy custom evolved. According to popular lore, scobys – symbiotic culture of bacteria and yeasts, the essential kombucha “mother” – were only to be passed on to friends on Tuesdays, and if the friend was successful in brewing, three wishes would be granted to the original brewer. This notion was memorialized in a pop song done by Renato Carosone (Pryor 1995). The brief Italian boom of kombucha is just one of many colorful examples of people’s enthusiastic experiences with kombucha in the past.

Out of the turmoil and sweeping change of the 1960’s, a new kombucha following appeared on the San Francisco hippie scene. This was probably the first time kombucha was popular outside of a few immigrant hands in the United States (Pryor 1996). The kombucha clique stayed relatively quiet over the following decades; a few articles and books were published concerning the health benefits, but none gained much traction in popular press and kombucha largely remained unknown. During the late 1980’s, it is rumored that Ronald Reagan was a religious kombucha consumer, drinking as much as a liter daily to combat his cancer diagnosis (Crum and LaGory 2016). By the 1990’s and through the 2000’s the practice of kombucha home-brewing in the United States was growing, spearheaded by notable author Gunther Frank and activist Betsy Pryor. Today’s fermentation guru Sandor Katz has also noted the dramatic rise in popularity of the beverage in his seminal book *The Art of Fermentation*.

As consumers begin to be more concerned with health, commercial kombucha producers have responded. Today, kombucha is mass produced for an expanding global market, bottled and sold as a health drink and function(al) food, i.e., a food product, or beverage, that provides wellness beyond basic nutrition such as added vitamins, enzymes, and probiotics (Scott 2008). The largest share of this market belongs to GT’s Kombucha, founded in 2001 by GT Dave, inspired from his mother’s astonishing recovery from cancer-which she credited to her daily consumption of kombucha. Within ten years, two other major brands-Wonder Drink and High County, joined the national market and kombucha was

undeniably on the commercial beverage map. A recent article in PR Newswire predicts astronomical growth in the global commercial market with profits soaring to \$1.8 billion by 2020 (PR Newswire 2016).

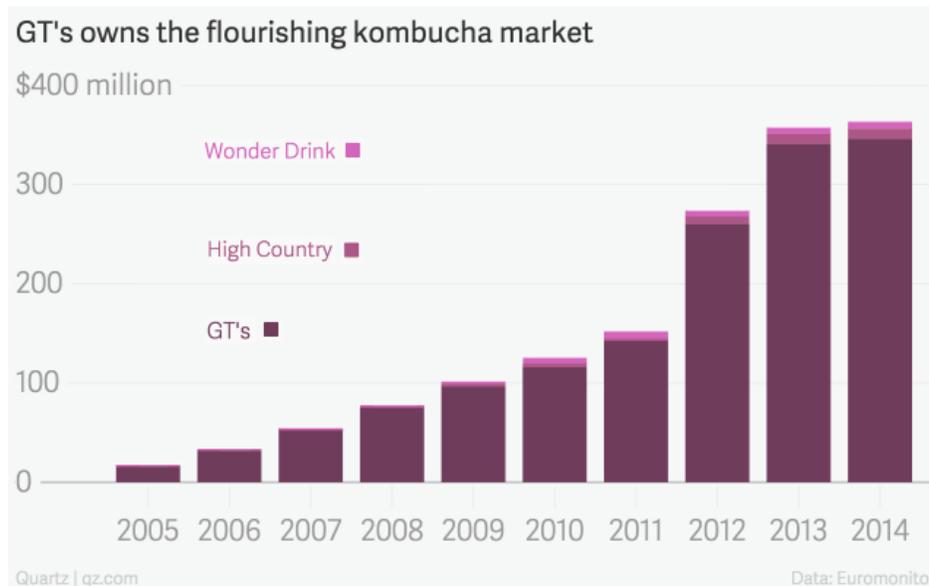


Figure 4. National commercial kombucha brands profits from 2005-2014 (Narula 2015)

While there is increasing amount of research being conducted on the biochemical composition and nutrition components of kombucha, there are also many personal testimonies touting kombucha cured cancer or paralysis. However, no research to date suggests kombucha as a medical treatment for any specific ailments; rather, the evidence supports the notion of kombucha as a healthy beverage option can be an integral part of a healthy lifestyle which, in turn, may lower overall vulnerability to poor health and disease.

How to brew

Kombucha can be made a few different ways, but the basic recipe is described here. Most people involved in this research project brew and store their kombucha in large glass containers, typically one or two gallon jars, and then transfer the finished product to 16 oz. swing top bottles as

shown in Figure 7. The process begins with freshly brewed black tea, sweetened with sugar, and then a scoby is added with a bit of 'starter tea', finished kombucha or vinegar to keep the pH balanced. The jar is then lightly sealed by a cloth secured with a rubber band left around the mouth and left to ferment in a place where the process will not be disturbed by sunlight or high levels of activity, see Figure 6. The hand-written directions (Figure 5) were originally scribed by home-brewer Ana and given to Alex, who photocopied them and passed them on to me.

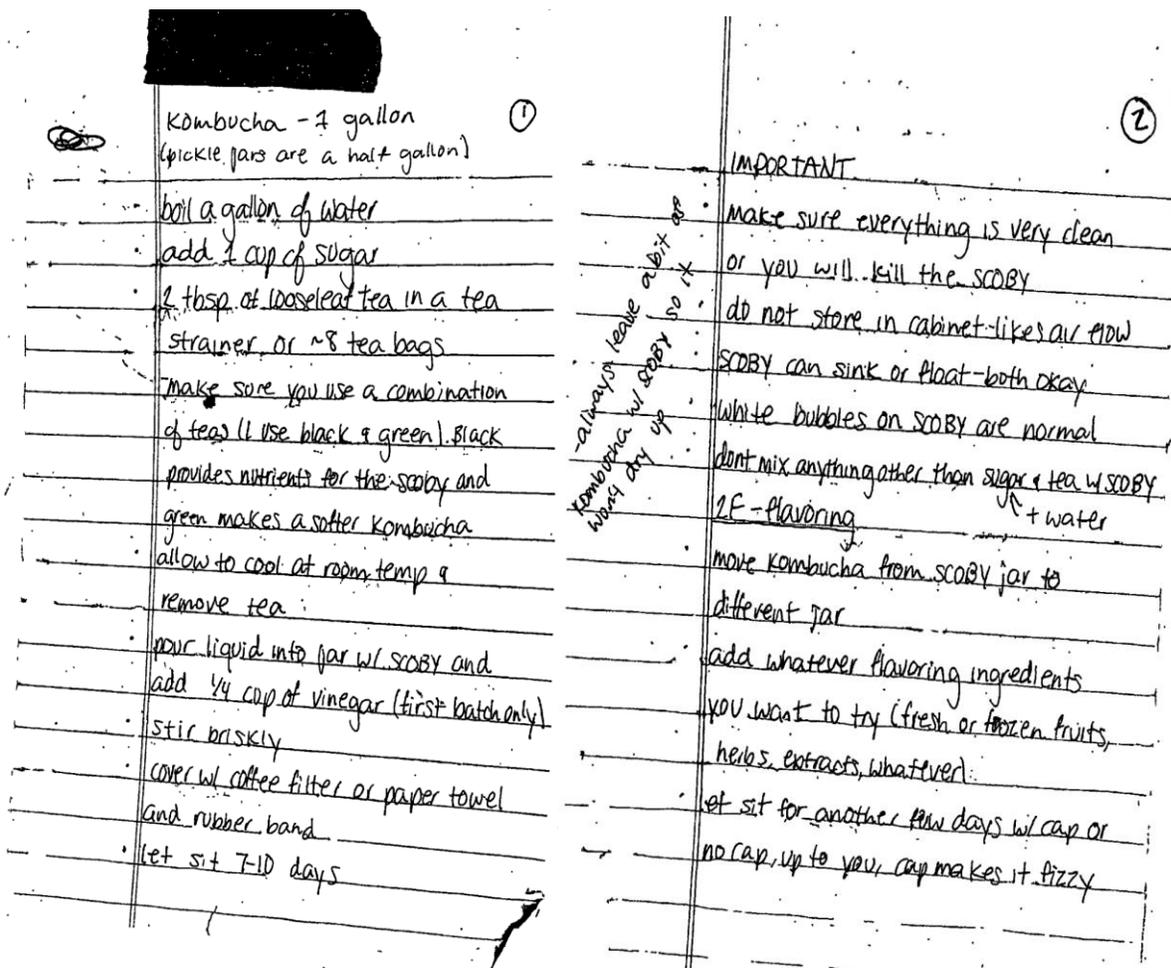


Figure 5. Hand-written notes from Ana on how to brew kombucha

What is a scoby?

SCOBY is the acronym for Symbiotic Community (or Culture, or Colony) of Bacteria and Yeast. This term was coined by Len Porzio to distinguish in discussions between the kombucha tea and the kombucha culture (Crum and LaGory 2016). In biology, a symbiotic relationship exists between two different life forms living together, which, as is the case of the scoby, is mutually supportive. A scoby is scientifically defined as a cellulosic pellicle with embedded bacteria and yeast living in symbiosis (Marsh 2015). There is some debate among fermenters as to what the “C” in scoby stands for. Colony is the least accepted word because by

definition, a colony is a group of the same kind of organisms living together, which is not the scenario with a scoby. Culture, on the other hand, can refer to the substrate in which the bacterial species are living within and does not give recognition to the organisms themselves. However, I, and others in the brewing community, prefer to use the word “community” because the connotations associated with this word more accurately describe the nature of the scoby. Merriam-Webster defines community as an interacting population of various kinds of individuals (species) in a common location, which exactly describes the relationship between the various yeasts and bacteria species within the floating gelatinous mat. An



Figure 6. Multiple scoby generations floating in a glass gallon jar of kombucha

additional definition of the word community is a feeling of fellowship with others, as a result of sharing common attitudes, interests, and goals. This definition resonates with one of the key themes that this project is exploring-sense of community gained through kombucha brewing.

There are also several misnomers associated with the scoby. For example, scobys are sometimes called mushrooms, but, since a mushroom is the fruiting body of fungi (Stamens 2005), this is clearly an incorrect characterization. Another common but imprecise name for the scoby is simply “the mother.” As a successful round of fermentation occurs, the scoby creates a new layer on top of the original mother-the next generation. As a scoby is constantly reproducing itself, it is more like a clone than one half of a parent partnership. That said, I, as well as others, do find myself calling the freshest layers of the scoby that develop on top of the original disk “babies,” which is also technically inaccurate. A discussion of the semantics of scobys and cultures and brewing practices/components is important because the varying names used to refer to the scoby can elicit different feelings and implications in brewers and thus can influence the relationship between the brewer and the brew.

In addition to the composition and understanding of the scoby, the source of the material is also important. In other words, it is useful to consider how brewers procure their scobys. Several routes exist, including ordering a dehydrated scoby online to be shipped through the mail or by patiently growing one from a bottle of unflavored, store-bought kombucha. However, these techniques lack personal connections, do not forge any new relationships, and cost money. Instead, scobys are often passed from brewer to brewer, an exchange made possible by the fermentation process itself. As the home-brew fermentation process undergoes multiple iterations, the scoby becomes a multi-layered structure and can be gently peeled apart without any damage occurring to the organisms. This new scoby can then be given to a friend, freeing up space in your original jar and enabling someone else to make kombucha at home. In turn, the new scoby will grow larger, and the cycle of multiplication, division, and sharing endures. The traditional technique of passing scobys from person to person is at

the heart of kombucha culture and, as the preferred means of scoby acquisition by brewers, is the focus of this project.

As time passes and the scoby grows, the microorganisms feed off the caffeine and sugars from the tea, converting them to acids and alcohols with a bubbly carbon dioxide byproduct. A shorter fermentation time will yield a milder, sweeter flat tea and as brew time is extended, the drink becomes fizzier and more sour tasting or vinegary. The amount of time it takes to ferment depends on several factors, air temperature and personal taste preferences being the main determinants, but the tea is usually complete within 10-20 days brewing on a Central Texas countertop or bookshelf. At this point, the brewer may choose to bottle the kombucha and refrigerate the tea (cold temperatures nearly halt



Figure 7. Typical swing-top bottles used in home-brew kombucha

the fermentation process), or they may elect to do a second round of fermentation, which increases carbonation and is typically the step when flavors are added. Other approaches to making kombucha exist, such as the continuous brew method, but most of the participants involved in this study follow the steps outlined above.

Site and situation: San Marcos, Texas

This project takes place in San Marcos, the county seat of Hays, located about thirty miles south of Austin along the I-35 corridor and the Balcones Escarpment, a geologic fault zone where the Gulf Coastal Plains transition into the Texas Hill Country. The rich, fertile soil of the blackland prairie to the east has traditionally supported a cotton-centric economy whereas cattle ranching reigned supreme

across the rocky, limestone hills of the Edwards Plateau. The karst topography of the Edwards Plateau has defined the aquifer system and allowed for the creation of artesian wells and spring-fed rivers so characteristic of the Central Texas region. According to underwater archeologist Dr. Joel Shiner, the San Marcos Springs, which bubble up beneath Spring Lake, is the oldest continually inhabited site in North America, with a history reaching back 20,000 years to the Clovis people (Shiner 1983).

The U.S. Census Bureau named San Marcos the fastest-growing city in the country for three consecutive years: 2013, 2014, and 2015. Current estimates put the 2016 population around 60,684, which is more than double the number from 1990 (U.S. Census Bureau 2016). This remarkable increase is representative of a regional pattern of explosive population growth. The Austin-Round Rock-San Marcos Metro Area is booming for several reasons, including a robust economic culture which remained relatively unscathed during the financial crisis of 2009 and business-friendly regulatory context that entices new companies to invest in the area, such as the Amazon Fulfillment Center recently established in San Marcos. Retail tourism plays a primary economic role in the city, attracting shoppers to the downtown square and to the largest outlet shopping center in the U.S., the combined Tanger Outlets and San Marcos Premium Outlets. In addition, San Marcos is home to Texas State University, the fourth largest public university in Texas with over 38,000 students, which is expanding its enrollment and footprint every semester (Texas State 2017).

San Marcos experiences mild winters and long, hot summers, typical of the humid subtropical climate designation (Dixon and Bray 2010). The outdoor-enthusiast has many options when it comes to local parks and natural areas, with miles of beautiful hill country trails to hike or bike across over 1200 acres of protected spaces (San Marcos Greenbelt Alliance 2015). The beautiful San Marcos River flows through town with plenty of public access for locals, students, and visitors to all enjoy swimming, snorkeling, paddling, and fishing. Many residents are committed to protecting our unique and sensitive river which is home to many endangered species including Texas Wild Rice which only grows in the

Upper San Marcos River. Love of the river and safeguarding the beautiful land around town is a common trait of many home-brewers.

The culture of the San Martian community is vibrant, colorful, and passionate one. The arts scene is alive and thriving; many public murals are being commissioned around town on formerly-blank walls, new art galleries are opening showcasing a variety of media, and pop-up events are becoming the norm. The local music scene is also flourishing, along with other forms of entertainment such as stand-up comedy and slam poetry readings. There is a “hippie” vibe around town, likely due to the youthful influence of college students and idealists who call this town home. Young people are some of the earliest adopters of new ideas and technologies, especially those marketed as “green.” Many residents, including those who participated in this study, are among the “alternative” or progressive camp: those who rally for environmental causes as well as social justice ones. Many residents value healthy lifestyles as evident from the health food, smoothie, and supplement/vitamin stores; the ‘Healthy Living’ section at the large regional chain grocery store; the expanding number of yoga studios, gyms, and work out groups; and a general enthusiasm for living a more authentic life.

Theoretical Framework

While there is limited literature and prior research on the social aspects of kombucha, there are, however, copious technical publications in fields such as microbiology and nutrition science on the topic. These technical, microbiological studies of kombucha are not included in this literature review because the nature of the content is not related to the study of the sociocultural practice of brewing kombucha. That said, the motivations of San Martians to produce kombucha in their own homes can be situated within three circles of relevant literatures, including: a broader analysis of fermented foods and culture, fermented foods as part of an alternative food system, and the general relationships between community and belonging. Sandor Katz is largely considered the chief crusader for fermentation in America today. Katz believes practices of fermentation can be empowering and liberating and an avenue to engage with the world(s) around (and within) you. By becoming an active participator and producer, fermentos (Katz' term for fermentation-enthusiasts) can reclaim their food systems and begin to improve the health of ourselves, our communities, and our world.

Fermented Foods and Culture

Fermentation is everywhere, yet the processes are rarely understood or appreciated. Several common foods are fermented, including cheese and bread as well as coffee, chocolate, and vanilla beans (Tamang 2010). Fermentation has been a traditional technique of food preservation and more on all inhabited continents since Neolithic times (Soni and Day 2014). In old world communities, the baker and the brewer both played vital roles in turning the raw goods of grain crops into food products with a longer shelf life (beer) and a higher value (bread). Both of these productions traditionally were done with fermentation. As such, there is a broad body of literature on the history of fermented foods.

Microorganisms are ambient in the environment and transform food. There is a long and demonstrable history of symbiotic coevolution of humans and microbes (Margulis and Sagan 1986).

Humans species evolved with and within microbial environments, less out of human ingenuity and more out of imperative and inescapable nature of microbes. In fact, human survival is connected to microbes (Scott 2008). Since Pasteur's discovery of microorganisms, they have had a troubled reputation. However, when considering sheer volume of species that are not visible to human eyes, overwhelmingly most microbes are "good" germs. Nevertheless, the predominate view that microbes are the source of disease, has created a culture of sterilization wherein consumers make a concerted effort to remove bacteria from our bodies and our food. As a result, most of today's mass-produced and hyper-marketed food is lacking in any life forms even though humans evolved as a species in conjunction with a multitude of other life forms present in the foods and beverages we consumed (Abbot 2004).

Alternative Food Systems

Major aspects of this project lean heavily on the notion of an alternative food system; the alternative food system movement rejects the dominant food system and seeks a more regenerative, healthful, and locally-oriented system of food production and distribution (Cleveland et al. 2014). From this perspective, the current food system is one that has been manipulated by large corporations with profit margins steering production methods. The history of the United States' food system is clear: Since WWII Americans have been sold convenience foods, frozen, sterile, highly processed food products that lack nutritional value (Katz 2003). The alternative, championed by Sally Fallon and Michal Pollan, among many others (Fallon 1999, Pollan 2005), advocates for "real" food instead: wholesome, nutritious, traditionally cooked and prepared food with intention and purpose. The alternative food movement is lauded as a solution to the ailments that come along with the American diet. Specifically, diet-related health issues are sweeping the country: obesity, heart disease, diabetes, and cancer rates have all sky-rocketed since the implementation of the modern food system. To combat these public health concerns, alternative food advocates suggest that we examine – and ultimately change – the system that produces these consequences.

Conventional farming practices and the current mode of food distribution have huge environmental impacts (Cleveland 2014) and notable negative social externalities. The industrial agricultural model has many consequences on our planet, including: soil degradation, excessive water use and waste, enormous petroleum-based energy use, and pollution from chemical fertilizers and pesticides to name a few (Belasco 2007). The agricultural industry is the number one polluter and has a colossal impact on climate change and global warming. Environmentalists tend to support agriculture reform (Cleveland et al. 2016) to counteract these atrocities.

In addition, food activists are also fighting for social justice (Katz 2012). They argue: To revive local food production and local food exchange is to secure local food economics (Blake 2010). Social revolution is preceded by changing the means of food production (Katz 2007). By growing one's own food, people are seeking to reclaim their production of food and bring the scale down from a global perspective to a community-level one. The idea is that it is socially empowering to realize self-reliance in some form or another, and that self-reliance is also good for environmental and personal health.

In this way, local communities are strengthened when they support alternative food systems. This has manifested in many forms. Many people now take an interest in backyard gardening and keeping chickens, participating in community gardens, supporting local farmers by shopping at farmers' markets and buying in to community supported agriculture (CSAs). The homestead and do-it-yourself (DIY) movements are strong (Caruso 2015), indicating American's changing preference towards self-reliance and independence from the globalized agricultural industry. The focus on local and seasonal produce are the hallmarks of alternative food systems (Cleveland 2015). Restructuring the production of our food can be the solution to so many of today's problems. Fermentos, a term used often by Sandor Katz, are active creators of unique products as opposed to passive consumers of mass-produced items. In sum, to reclaim one's food can be empowering, promote social and environmental justice, and contribute to healing our sick bodies and unhealthy world.

Community and Group Belonging

Food and community are two concepts that are intrinsically tied together. It's natural for food and people to be together, as we evolved as a species in small communities collaborating on food. Community and culture are inherently enmeshed with food and the daily necessity of nourishment. Survival was ensured by collaborating as a group, including in the cultivation, preparation, and consumption of food. Sharing meals creates connections and opportunities for further group integration. Networks of sharing and exchange, mutual support and caring are traced and reiterated through shared food practices.

As purported by prominent entomologist E. O. Wilson in his later work on superorganisms such as insect colonies and human societies, an individual's strong sense of belonging to the group is intrinsically tied to the success of that group (Wilson 2012). This innately human desire to belong to a group or tribe is telling of our evolutionary course. We evolved as a species in small groups or communities; our primate brains are still designed to manage the connections between about 200 individuals which is roughly the size of ancient bands of peoples. In today's disjointed and fragmented world, we are simultaneously and instantaneously connected to thousands of people, yet ironically, depression, anxiety, and loneliness plague our society as we are isolated and removed from the group and community structure our brains crave. In other words, having a strong sense of community and connection to other the people, leads to an increase in quality of life and healthier, more productive members of the group.

Researchers have demonstrated how fermented food products and the practice of these recipes can create tenacity and mindfulness (Santana et al. 2015). Fermenters fall into habits of cycle, are more in tune with seasonality and natural rhythms. The *Permaculture Book of Ferment and Human Nutrition* (Mollison 1993) discusses many of the methods of returning to traditional food preparation, production,

cooking, and preservation techniques. Fermentation practices bring greater awareness to the interconnectedness of all species through understanding the relationship between bacteria and yeasts, SCOBY and human (Scott and Sullivan 2008).

Moreover, fermented foods are unique, living expressions of place. The exact species of bacteria and fungi present in any symbiotic community will vary (Crum and La Gory 2016). Every scoby is a totally unique combination of species and will evolve to better adapt to its environment. Kombucha exemplifies the way food enables belonging and community building. Many cultural identities revolve around fermented foods. As previously stated, fermented foods have a long history with virtually every traditional culture (Kabak 2011) and most cultures developed their own unique ferments. Because a fermented food is basically in a state departed from fresh, but not yet rotten, the unique flavors can be an acquired taste. Persons belonging to a certain culture or ethnicity enjoy the taste and flavor of their particular ferment, but outsiders to the group may find that food repulsive and disgusting. This effectively reinforces cultural identity through pride in culturally-specific fermented foods.

Methods

This research project employs an ethnographic approach to explore and define kombucha culture. Through cultural immersion and systematic investigation as both a participant and keen observer, the goal of this research project is to understand the motivations behind the practices that defines this group and to understand why this group of people is brewing kombucha at home. To achieve this goal with integrity, the group being studied must be allowed to speak for itself. Thus, I have chosen a combination of qualitative research approaches: semi-structured interviews, focus groups, and participant-observation, for the rich, descriptive data produced by these methods. Together, these techniques allow for complete picture of the personal and collective experience of kombucha brewers to be accurately gleaned and will illuminate key motivations that drive people to participate in this budding kombucha culture.

In total twenty-five kombucha home-brewers gave participated in this project. Fifteen interviews were conducted, the most of which were with individual brewers and a few with couples who brew together as a unit. In addition, two focus groups comprised of seven participants each were also carried out to generate group consensus about why a kombucha practice was the common denominator of each group member. Most of the interview and focus group participants are actively involved in several local food and/or environment groups that I am also engaged with, such as the San Marcos Farmers Market community and the SMTX permaculture group, as well as the sister farms supported by that organization: Little Bluestem Farm, River Bottom Farms, Boxcar Farm and Garden, and Thigh High Gardens. In that community work, I have been working alongside other kombucha brewers in the community in planning and implementing meetings, workshops, and events. At one such event, while I was volunteering on the food prep team for the Hill Country Fair, “a celebration of San Marcos culture benefiting local farms and gardens” (Thigh High Garden 2016) the conversation among the women chopping vegetables organically turned to fermentation and kombucha – and I paid close attention. This

multi-faceted, multi-method approach, using data from direct conversations about kombucha motivations and drawing on my own experiences within this community, allows for a thorough examination of what exactly constitutes kombucha culture in San Marcos, Texas.

Data Collection

Interviews

The fifteen different interview sessions were personal, one-on-one conversations where kombucha brewers were asked to describe their experiences with kombucha and motivation for their practice. A few brewers practice brewing kombucha with their partner, so I interviewed these couples as a unit, together. Because of my personal connection to so many brewers in the local community, reaching out to find kombucha enthusiasts to interview was not difficult. I first reached out to known kombucha brewers, inquiring by text, phone call, or in person, to see if they were interested in contributing to my project. I recruited additional participants through snowball sampling, asking interviewees for recommendations of people they have passed along scobys to or other people they knew of who were brewing kombucha at home. This sampling method achieved two things: first, it led me to other brewers to invite to participate and, second, it demonstrated the interconnected and woven nature of kombucha culture.

Keeping in mind the main investigation of this study is concerning the practice of brewing kombucha at home, I purposefully conducted the interviews in the interviewees' own kitchens. The intention was to discuss kombucha brewing practice in the same spaces that the brewer is most fundamentally engaged with kombucha culture. After the participants agreed to interviewing at home, we arranged a mutual time to visit. Participants were given the alternative to have the interview take place at my own home or a more neutral space like a coffee shop or the public library if for any reason

they did not want to or could not accommodate the interview in their home. However, no one declined an in-home interview as most brewers are quite enthusiastic to share their fervor for ferments in their spaces of fermentation.

The interview exchanges were informal and quite comfortable for all parties involved. I typically met with participants in the evening after both of us had experienced long workdays, but this did not diminish their enthusiasm for talking about kombucha. We chatted in their kitchens, as well as a few back porches and living rooms. As we talked, participants proudly showed off their scobys, some residing in a 'scooby hotel', essentially a controlled vessel for housing scobys not actively producing kombucha, and generously offered samples to me. In addition to kombucha, these kitchens were brimming other food projects, such as the kraut fermenting in a beautiful aquamarine crock or the sourdough bubbling up in preparation of the next day's pizza dinner.

Participants told me about who first introduced them to brewing kombucha, revealing handwritten and dearly treasured instructions that were given to them as guides for the first few rounds, now tucked away safely alongside other cherished recipes. Exact processes varied from brewer to brewer; some preferred to use both green and black teas, some were more experimental in the types of sugar utilized, and the unique flavor combinations created by individuals were where the biggest differences occurred in practice. Similarities among many participants included being gifted their original scoby from a friend after discovering they had a taste for the fizzy beverage. A few participants told me about the specific health concerns that initially spurred their interest in fermented foods as an alternative path to healing.

These conversations gave a clear overview of how individuals practice brewing kombucha at home and why they initially got started brewing and were great starting points for understanding the connections within this group. Although full of informative and passionate expressions, the interviews

did not immediately reveal deeper motivations for brewing or the strong sense of belonging that was gleaned once the group members were brought together. These semi-structured conversations (a.k.a. focus groups) generated insight into the similarities and differences that individual group members brought to the collective.

Focus Groups

As alluded to above, the focus group method is particularly appropriate for this study because the insight gained from dynamic, group conversations facilitate sharing around the heart of the research question: what kinds of social bonds created and/or enhanced through a shared practice of kombucha brewing? The group as a unit cooperatively generated knowledge, thus shifting balance of power out of my role as the researcher and into the hands of the participants. I met on two occasions with groups of kombucha brewers at different local farms. One occasion was after an SMTX Permaculture meeting at Thigh High Gardens. As the brewers from the group gathered to discuss their kombucha practices, a few other Permaculture enthusiasts lingered around the open-air patio. As the night encroached around us and the group conversation explored the connections we had forged through brewing, the others' interest in brewing their own kombucha grew and by the end of the evening they were rewarded with their own scobys to take home and some personalized instructions on how to begin the process.

The other communal meeting was held on a different local farm, Boxcar Farm and Garden. A group of seven participants were gathered at a large handcrafted dinner table collectively chopping vegetables in preparation for serving food at an upcoming community festival. The group conversation that night was lively, with colorful stories exchanged about people's first introduction to kombucha. Both discussions were generally democratic and not necessarily dominated by any particularly vocal participant, although some members tended to stay quiet until directly addressed. By steering the discussions towards deeper topics such as the connections between members and the strong sense of

community felt amongst the group, we all explored together how impactful kombucha brewing had been in forming social bonds between members. Even though this acknowledgement came from within the group itself, I think it was a surprising revelation to some and might not have emerged without the vibrant discussion of the focus group. The conversations generated from the supportive, collaborative setting of the focus group led directly to better understanding the networks, bonds, sense of community and togetherness that this group experiences.

Participant Observation

Participant observation in the context of this project involved describing my own experiences of being a member in this community group and providing detailed descriptions and thoughtful reflections after interactions with others and following my own individual brewing sessions. This research topic was organically generated from my own unique position and experiences. As such, in the tradition of feminist researcher Gillian Rose, I carefully examine my own position within this group of fermenters and acknowledge that my interactions with the group helped to shape the data generated, thus influencing the knowledge that was produced from these interviews and focus groups (Rose 1997). This project came to fruition as two parts of my life came together: completing graduate study in Geography, including studying critical qualitative methods, and pursuing my budding passion for brewing kombucha at home with the support of a larger group of fermenters. The merging of these two aspects of my life has resulted in a unique project that could not have likely been conceived of by anyone else.

I have been immersed in this mutual community of kombucha culture since before this project was even an inkling of a thought. An active member of SMTX Permaculture for four years now, I volunteer on local farms and help with other events promoting sustainable agriculture, namely the Hill Country Fair. Another event where brewers convened was in Austin at the Fermentation Festival last October. One of the interviewees who is particularly committed to kombucha, among other many other

ferments and home food projects, led a hands-on fermentation class and workshop at Little Bluestem Farm last spring that I attended. By being active and engaged with brewers in so many other avenues besides the formal interviews and focus groups, I could gain a deeper and broader understanding of why people are so committed to the product and practice of kombucha

Ethics/IRB

Careful consideration was taken to ensure the safety and security of all respondents involved in this project. Because of my close familiarity and then general benign nature of this project, there was very little risk of harm resulting from their participation. An application for an exemption of review was submitted to the Texas State Institutional Review Board (IBR) and approved for an exemption of full review.

Analysis Techniques

I wanted to be able to participate in and facilitate the conversations with brewers, so it was important for me to record them so as to dispense with the distraction of writing down responses. Accordingly, the interviews and focus groups were digitally recorded on my iPhone using the voice memos app. In addition, after some of the interviews, I took photographs of the brewers in the kitchen, proud of their food projects brewing on the counter. I took detailed field notes, specifying the conditions before the interview and reflecting on our conversations afterwards, referring to the voice recordings often. I chose not to transcribe the audio recordings for many reasons, chiefly lack of money and time, but also because the scope of this project does not dictate it necessary. After attending any events, I would create a field note entry describing the experience and what observations I may have made.

After data collection commenced, the data was analyzed in a myriad of ways. I began by combing through my interviews, notes, photographs, and recordings, pulling out what could be evidence of motivation to participate in kombucha culture. Three broad categories evolved, and I then used focused coding techniques to further scrutinize the data. By coding the data, the themes became more condensed and focused, enabling me to identify patterns, understand connections, and elicit meaning from the observations and interviews. From this analysis, three main motivations for homebrewing kombucha were revealed, each of which will be presented in the Discussion section of this paper.

After I had generated the three themes, I went back to some of my original interviewees and presented my interpretations. This qualitative analysis technique is known as member-checking, wherein the research findings and conclusions are shared with the informants to see if the results reflect what they intended. This is a key step in shifting power from the researcher into the research subjects (Watson and Till 2010). Through member-checking, I successfully sought to increase the validity and rigor of the research. The brewers concurred with my findings of three main reasons motivating a kombucha home-brew practice.

Findings and discussion

Thoughtful analysis and consideration of data generated from the interviews, focus groups, and participant observation illuminated three key themes. These three themes explain why brewers are motivated to begin and maintain their kombucha practice. The first theme revolves around the *health and wellness* benefits one receives from regular consumption of the beverage and a healthy habit of home-brewing. The second reason people are motivated to make kombucha at home is because brewers view their kombucha practice as part of their active *engagement with alternative food systems*. The third theme that emerged from the data is that home brewing kombucha is part of a process of *cultivating a sense of community*. The combination of these common motivations, communal beliefs, and shared practices culminates into what I termed Kombucha Culture. The group of home-brewers in San Marcos described herein demonstrates Kombucha Culture through many different avenues of expression. The presence of Kombucha Culture here is illustrative of a greater phenomenon happening in other locales around the nation. While this fermented beverage may not be a panacea to solve all the world's problems, but it is insightful to consider why so many people have a practice of brewing kombucha at home.

Health and Wellness

When asked what motivates their practice, most brewers began with their concerns for personal health and well-being. Kombucha has a reputation as a healthful product and the pursuit of better health was the primary reason that most of the participants ventured into the world of ferments – and specifically into kombucha. Kombucha is touted as a functional food, with nutritional benefits that go

beyond providing basic nutrients; these additional benefits include: Vitamins, minerals, antioxidants proven to possess cancer-fighting/preventative qualities, and amino acids. Respondent Alex recalled her first encounter with kombucha was at a small health foods shop in Austin where she was introduced to the beverage by a group of her “crazy old-school Austin hippie friends who were really into macrobiotic food.”

One of the biggest reasons people brew and consume kombucha is for the live cultures of yeast and bacteria that can help restore our own gut microbiota. The benefits of eating live foods for gut health is an emerging field and the importance of a healthy digestive system to overall health is becoming more apparent (Chaves-Lopez et al.

2014). Improving the intestinal tract can lead to

better digestion. Leah, during the first focus group, recounted the struggles she underwent with her digestive system including unpleasant experiences with IBS. Her health issues were really starting to negatively affect her life, so she decided to take action and combat her symptoms through a diet that focused on digestive health. This led her down the path of ferments – and eventually to kombucha. I recall she was the first of my friends to lend me one of Sandor Katz’s books, *Wild Fermentation*.

Another benefit from regular kombucha consumption is a strengthened immune system. Scientists are just beginning to understand the connection to gut health and psychological health, but

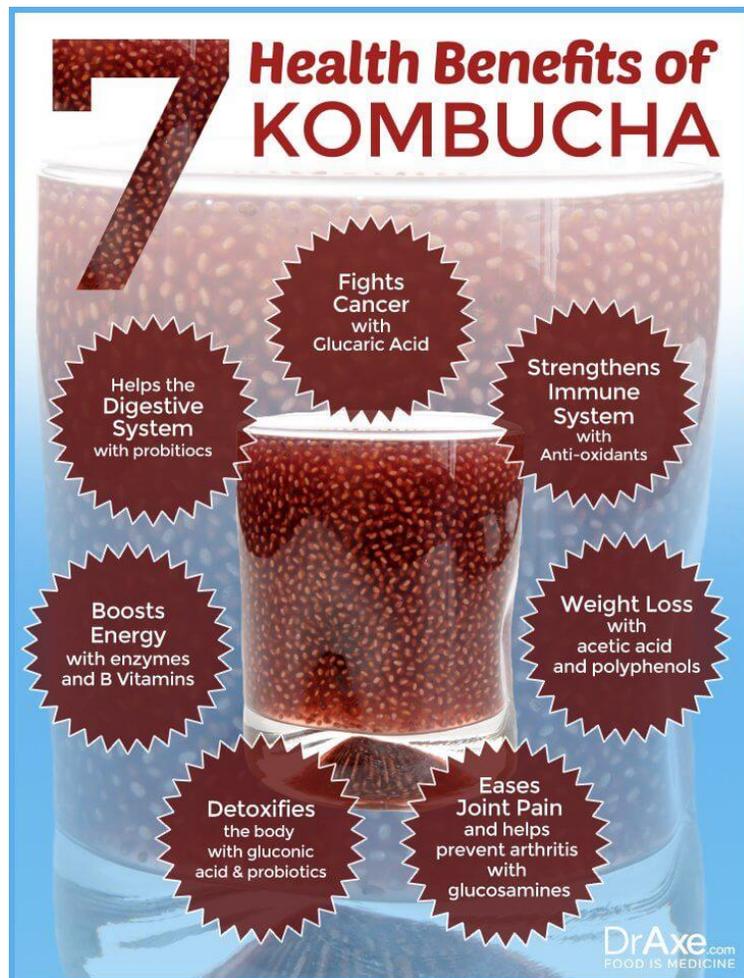


Figure 8. Seven Health Benefits of Kombucha (Dr.Axe.com 2017)

the implications are significant. Some researchers believe the root cause of conditions such as ADHD, ADD, and anxiety are poor gut health. Consuming a diversity of live foods promotes a healthy, diverse gut flora that in turn, can encourage good mental health.

Kombucha consumption can also provide immunity support. Ninety percent of our physical immune system is located in the walls of our intestines; bolstering gut health in turn supports top immune system function performance. There is anecdotal evidence that kombucha can even help prevent cancer because of its anti-oxidant properties. Sandor Katz' original engagement with fermentation was in response to a positive HIV diagnosis. Katz, seeking alternatives to western medicine, found a group of people living on a small farm in Tennessee practicing traditional food traditions that incorporated a whole array of ferments across the diet in support of living a healthy life with AIDS/HIV. He has been incorporating ferments of all kind into his diet for the last twenty years and has seen a marked improvement in overall health.

One interviewee reported an unusual scenario. Her twin sister suffered a very serious rattlesnake bite to the foot in early spring 2014 that warranted five days in the hospital where she was administered 25 vials of antivenin (hospital doctors told her a typical dosage was only four). This particularly severe snakebite, coupled with a preexisting weak immune system, left her immobile for months. As her body processed the extreme amount of neutralized venom, her mind recovered from trauma. She incorporated the regular consumption of kombucha in her diet, believing it to help improve her overall level of health and wellness.

Another unexpected response that was reported multiple times was the consumption of home-brewed kombucha as a healthier carbonated beverage alternative to soda or beer. Brewer Judith talked about her motivation to brew kombucha at home so her partner would drink less Dr. Pepper, a carbonated soft drink loaded with high fructose corn syrup. I have heard many testimonies about a serious addiction to soda that was curbed or eliminated by turning, instead to kombucha. Kombucha is

also an option for those who opt not to drink alcoholic beverages for any number of reasons. Lynn mentioned that he enjoys having kombucha in place of beer when he wants to make a healthful choice but still enjoy a cold, refreshing bubbly: “It’s nice to have a drink to share and enjoy with others while socializing without having to ingest alcohol.”

Beyond the health benefits, one of the most common explanations for maintaining a kombucha practice was simply because “it tastes good!”, as stated by Veronica. A lightly effervescent, flavorful beverage is enjoyable and refreshing, especially in the sweltering Texas summer heat. Because fully brewed kombucha isn’t chock full of sugar and caffeine, it is an enjoyable beverage to consume on a hot day. In addition, the practice of brewing kombucha, waiting for it to ferment, and then continuing to bottle and brew again is a cultivated habit. To stay in tune with your scoby and the kombucha fermentation process keeps you aware of more natural cycles and rhythms.

Engagement with alternative food systems

Fourteen out of eighteen respondents referred to feeling engaged with alternative food systems by brewing kombucha at home. Kombucha is one of the most easily accessible and least intimidating fermentations processes, so it’s no surprise that many fermentos begin their journey into the world of ferments with kombucha. It has relatively low startup costs and minimal inputs required to brew, especially compared more complex fermentation processes, such as beer home-brewing. Plus, bottled kombucha sold in stores is much more expensive than kombucha brewed at home. In addition, Homemade food and beverage products decrease dependency on supermarkets and the agro-industrial food system, which degrade our environment and squander resources in the name of profit. Practices such as brewing kombucha at home aim to mitigate some of the negative environmental and ecological impacts of mass food production and distribution. In fact, almost every participant in this project is directly engaged with a local, alternative food system: some brewers are backyard gardeners, some run small holistic farms, some practice permaculture and restorative agriculture techniques. A commitment

to the availability of high-quality, locally grown, seasonally- appropriate produce was a common thread among participants.

Alternative food systems support local community markets through non-cash exchanges. Homemade kombucha can be gifted or traded for other valuable goods. Multiple interviewees reported using kombucha to barter for other goods such as produce or canned items. Ali even reported that she was compensated in gallons of kombucha for volunteering at a local farm. Many participated also named gifting kombucha as one way they engage in alternative economies. As this evidence suggests, kombucha brewing creates empowering change on three nested scales, allowing home-brewers can reclaim their food and begin to improve the health of individual bodies, wider communities, and the planet as a whole.

Sense of Community

The third theme that this study brought to light is the focus on the communal aspect of brewing kombucha at home. Almost every single brewer involved in this project mentioned this theme in one way or another. When asked about how they originally became involved in home-brewing kombucha, most respondents said they were introduced to ferments by close friends. The previous themes of health and wellness along with engagement with alternative food systems are important, but I believe this final theme to be the most insightful reason that people are brewing kombucha because of its critical contribution to the development of Kombucha Culture. How exactly does home-brewing kombucha cultivate a sense of community? Through networks of home-brewers sharing their passion, through friendships and bonds foraged through the practice, and from the collective sense of pride that kombucha brewers possess for both their home-made elixirs and the hometown that gave rise to this phenomenon.

Social networks (not of the digital media variety) are created as one brewer passes on a scoby and instructions on how to brew to a friend. For example, interviewee Veronica talked about first acquiring a scoby from her friend, Katie. “Katie gave me a scoby, but I didn’t really know what to do with it. So, I went over to her house and watched her brew. I took lots of notes, as you know I do, and Katie was really patient as I asked a lot of questions.” The exchange of the physical materials such as the scoby, starter kombucha, maybe even a brewing vessel is enhanced by the exchange of information about the brewing process. Through sharing ideas and materials, webs of brewers emerge. The scoby family tree (see Figure 9) is a flow-chart depicting the exchange of scobys between home-brewers in San Marcos created with data from the interviews and focus groups. As you can see from the chart, Veronica (V for short) acquired her scoby from Katie, whom acquired her scoby from Abby. Veronica also gave away iterations of her scoby to Kristin, DG, Lynn, and Ali & Phil. Some of the brewers included in this study did not receive their scoby from others involved in the project. These brewers (Bess & Payden, Sam & Jesse, Ellen, etc.) acquired their scobys either from other friends, online mail-order, or growing their own from a plain-flavored bottled kombucha from the store. The chart demonstrates how the practice of home-brewing can spread and creates a web connecting people through the common thread of kombucha.

This study revealed some other major elements to kombucha culture, including the importance of the scoby and the wider networks built through its exchange. For example, by swapping

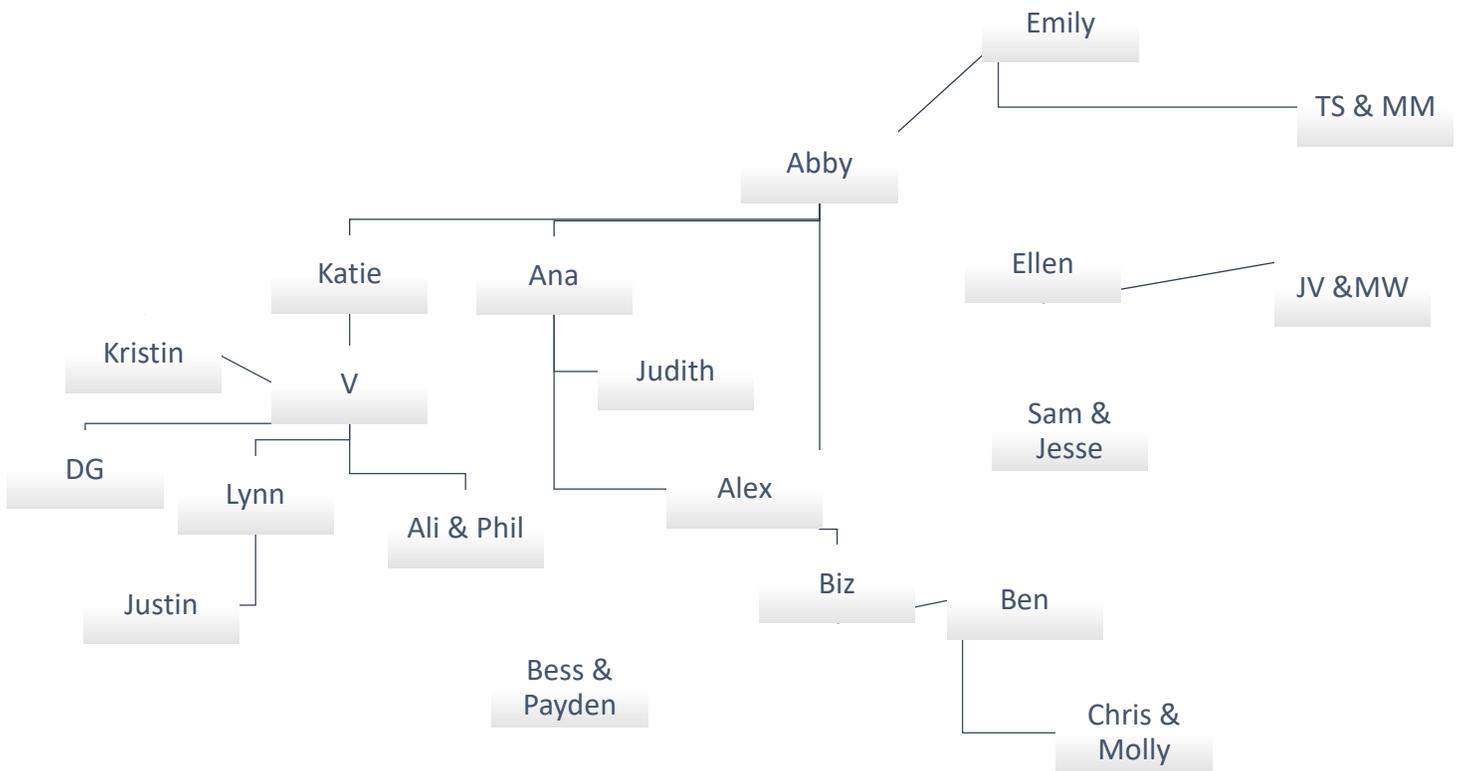


Figure 9. Mapping Kombucha Culture Networks

the physical material of the scoby, fermenters create exchange networks and establish mutually beneficial friendships based on sharing and common interest. Trust develops out of these interactions and fermenters then feel as though they can rely on each other for trading other resources, such as tools and supplies; information and advice for troubleshooting problems; or for feedback or help in implementing new ideas. These networks are strengthened as social connections become deeper and last longer. The significance of this factor is manifest when you consider that the opportunity for personal networking and sharing of genetic material heritage is lost when scobys are purchased commercially. Out of the home-brewers that I talked to, only two people utilized these more detached

methods simply because at the time they began brewing, they didn't know anyone with a scoby in active production. Both of these participants expressed appreciation and respect for the human-to-human exchange process and have since shared their scobys with other new brewers.

Brewers providing feedback and support concerning fermentation issues tend to also share concern and advice for each other's life problems. Interactions between individuals, such as scoby swapping and shared practices such as brewing together, create bonds and cultivates friendships. These friendships are reinforced through sharing the final brew product together. One of the more unexpected findings of this study was how many people talked about sharing their brews with friends while entertaining. During my interview with Lynn, he talked about how much he loves to "bust out the 'buch" when friends gather at his home or bring it along to parties. He expressed a real sense of pride in his creation and a need to share this with his friends. This sharing factor ties into a sense of community because the members want to give back to the group.

Another way in which these networks are reinforced are through community events. For example, most of the brewers involved in this project attended the third annual Hill Country Fair in November 2016, hosted at Thigh High Gardens (Thigh High Gardens 2017). At this festival, homemade fermented beverages were spotlighted, and there were multiple varieties of kombucha available for purchase through different vendors. Other events such as Abby's fermentation class she held at Little Bluestem Farm, brought individuals together who shared a common interest in learning more about home fermentation projects, including kombucha. Some respondents admitted that it was less the subject matter and more the classmates that brought them to a fermentation class, thus highlighting the importance of a sense of community. Kristen told me (referencing a different social occasion) "Anything I can learn with a group of girls is awesome!"; clearly, communal learning can be an effective tool in strengthening groups. Through many other shared community events less directly related to kombucha,

such as farm work days and organizing friends' weddings and the unfortunate memorial services, this network of brewers grows and a sense of community is enhanced.

San Martians have an enthusiasm for their community as demonstrated when Ali declared "these are my people!" when I inquired about her connections to other brewers in town. A collective sense of pride for San Marcos as hometown is shared among brewers even though not all of them currently live in the vicinity. This love of place unites brewers and gives the network a background or stage. This network of brewers produces friendships and belonging, which in turn evolve into group identity and belonging-chief components of a strong sense of community.

Conclusions

As the word “culture” connotes multiple definitions from anthropology, biology, and beyond, throughout this project, I have utilized the term “kombucha culture” to evoke a blended meaning of the word culture in reference to the group of people who create networks of shared ideals, beliefs, and material practices related to brewing kombucha. The scoby family tree (Figure 9) shows the connections between fermenters, a physical tracing of the spreading of culture, specifically a “Kombucha Culture”. Kombucha Culture satisfies an innately human need to be included and accepted by the group (Wilson 2012). Through sharing and exchanging information and materials, brewers become more connected through social networks. Friendships are created and strengthen through the practice of brewing kombucha. By sharing common goals, and a collective sense of pride for kombucha products, brewers build a collective identity.

In response, this project’s goal was to understand why so many of my friends are passionate about brewing kombucha at home. As demonstrated through the dialogue generated during interviews, the conversations of focus groups, and my own immersive experience with this group of hometown fermentation enthusiasts, three key pillars of Kombucha Culture emerged. First, a concern for personal health and wellbeing; second, an active engagement with at least some aspects of alternative food systems; and thirdly, a commitment to a strong and vibrant local sense of community.

While this project is small-scale and locally-based, the project findings can be applied to much more than home-brewing kombucha in San Marcos. By identifying the particular motivations of local brewers to engage in Kombucha Culture, we simultaneously have defined values with universal appeal. These three themes echo the sentiments of many people across the country, and indeed, around the globe, who are striving for a better life in today’s uncertain world. Kombucha Culture is the expression of a collective desire for a more healthful and balanced lifestyle in a supportive community striving for a

better – local, seasonal, organic – food system. Thus, the insights garnered from this study resonate much more broadly.

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