

The pantry as a multi-species space, by Zayaan Khan

"You are amazed; but then I am not, you see, one of your 200-rupees-a-month cookery johnnies, but my own master, working beneath the saffron and green winking of my personal neon goddess. And my chutneys and kasaundies are, after all, connected to my nocturnal scribbings -- by day amongst the pickle-vats, by night within these sheets, I spend my time at the great work of preserving. Memory, as well as fruit, is being saved from the corruption of the clocks."

- p. 38, *Midnight's Children*, Salman Rushdie

This essay calls to multi-species research to open alternatives to “humanism” and anthropocentrism in the social studies and humanities. I will be discussing the works of Heather Paxson and briefly Eduardo Kohn as well as various other multi-species thinkers towards understanding the art of fermentation.

Humanism and anthropocentrism maintain humans as the central important focus in systems of thought and in contrast, multi-species “aims to decenter the human, striving to achieve some detachment from its precepts, assumptions, and conceits.”¹ as anthropologist John Hartigan says. He sees multi-species in opposition to the Anthropocene, challenging it to “displace the centrality of the human”². Hartigan recognises the multi-specism that each human is and uses this as a starting point to his work. He states, “the ‘human’ is comprised of masses of nonhumans—internal swarms of bacteria, viruses, and fungi vastly outnumber our human cell by a ratio of about 9 to 1. We fundamentally misunderstand the human if we see it as a singular, unified agent; rather, what ‘we’ are as a species is utterly entangled in copious folds of non-humans, without which we would not exist.”³

¹ Hartigan, J. (2014). Multispecies vs Anthropocene. [Blog] *Aesop's Anthropology*. Available at: <http://www.aesopsanthropology.com/blog/?p=287#more-287> [Accessed 02 September 2016].

² Hartigan, J. (2014). Multispecies vs Anthropocene. [Blog] *Aesop's Anthropology*. Available at: <http://www.aesopsanthropology.com/blog/?p=287#more-287> [Accessed 02 September 2016].

³ Hartigan, J. (2014). Multispecies vs Anthropocene. [Blog] *Aesop's Anthropology*. Available at: <http://www.aesopsanthropology.com/blog/?p=287#more-287> [Accessed 02 September 2016].

Eduardo Kohn influences us to think “beyond the human” and opens his book with descriptions of the accessing of power through shape-shifting, the ability of humanity to be fluid through his telling of the *runa puma*, those who shift from human into being jaguars, “shape-shifting human-jaguars”⁴.

He explains as follows,

“Runa in Quichua means “person”; puma means “predator” or “jaguar.” These runa puma—beings who can see themselves being seen by jaguars as fellow predators, and who also sometimes see other humans the way jaguars do, namely, as prey—have been known to wander all the way down to the distant Napo River.”⁵

Yet in a similar way we may see this as a description of where humanism or anthropocentrism has led us, a current global state of inequality, injustice and slow violence in action. If we see *puma* in Kohn’s description of *runa puma* to mean “predator” we may see a similarity in Riane Eisler’s description of the “dominator”:

“In the domination system, somebody has to be on top and somebody has to be on the bottom. People learn, starting in early childhood, to obey orders without question. They learn to carry a harsh voice in their heads telling them they’re no good, they don’t deserve love, they need to be punished. Families and societies are based on control that is explicitly or implicitly backed up by guilt, fear, and force. The world is divided into in-groups and out-groups, with those who are different seen as enemies to be conquered or destroyed.”⁶

In the current state of vast specie depletion, environmental collapse, tragic human suffering and a time of the global arms deal, imagining a world without humanity may create a sense of peace for some people. Yet what a paradox,

⁴ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p2.

⁵ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p2.

⁶ Eisler, R. (1988). *The Chalice and the Blade: Our History, Our Future*. San Francisco: HarperCollins.

to wish for ones own species demise. We are at constant evolution and adaptation within this world. Through the international Slow Food Terra Madre network⁷, I've come to recognise the immense power of humanity towards custodianship within the land, guardians of biodiversity against corporatisation and ecosystem depletion.

In the opening of Eduardo Kohn's book, "How Forests Think" he uses the vignette of eating and being eaten, the jaguar seeing to eat. He supposes that the act of the jaguar seeing "you as a being capable of looking back—a self like himself, a *you*—he'll leave you alone. But if he should come to see you as prey—an *it*—you may well become dead meat."⁸ This act of seeing and being seen is spoken about countless times in the descriptions of traditional hunters and hunting and in a similar way the adage, 'You have to see the animal in order to eat it' speaks true.

Kohn goes on to speak about eating as "also bring[ing] people in intimate relation to the many other kinds of nonhuman beings that make the forest their home."⁹ To look briefly at hunting as an example, to be able to hunt one must have innate knowledge of the land and tracking becomes vital to surviving but also in the daily joys of living, as we see in the Craig and Damon Foster film, *The Great Dance* (2000). In the film we follow Karoha Langwane as he ventures out to hunt in the Kalahari Desert, running for hours in high temperatures without water, tracking kudu. He sees a kudu and follows her, she flees but he is able to maintain communication with her and follow her track. Eventually she wearies and he is able to catch up with her. She faces him and in this act of seeing - she seeing him, he facing and seeing her, exhausted and accepting of her fate. He throws his spear as they continue to face and see each other. As she finally falls and dies he picks up sand and sprinkles a

⁷ (2016). Terra Madre - The Food Communities Network. [online]. Available at: <http://www.terramadre.info/en/> [Accessed 04 September 2016].

⁸ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p5.

⁹ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p5.

handful over her body, signifying an appreciation for the hunt, for the sacred land and its ability to feed. The intimate relation that Kohn speaks of can be further illustrated in the following scene where parts of the animal are used beyond food, sinew for the hunters bow and fat for medicinal use, “this involvement draws people into the lives of the forest”¹⁰ - the act of consumption is our ultimate connection to the landscape around us, the forest, in Kohn’s case. Kohn describes again, “getting food through hunting, fishing, gathering, gardening, and the management of a variety of ecological assemblages involves people intimately with one of the most complex ecosystems in the world—one that is chock-full of an astounding array of different kinds of interacting and mutually constituting beings.”¹¹

Multi-species work engages around alternatives to anthropocentrism when we look through the lens of eating and food. In Heather Paxson’s book, *The Life of Cheese: Crafting Food and Value in America*, Paxson speaks of “artisanal collaboration with microbial agencies, and the mutual constitution of production and consumption.” Paxson uses post-pastoralism to lay out the relationship between nature and culture, rather the inter-relationship between these two, that they are “co-workers”, they work together to create the “unfinished commodity” as she calls it.¹² The unfinished commodity in this case is the artisanal product that is created over many hours or years of creation, understanding ecology, personal choice and ability, even morality. This unfinished commodity is not separate from its story but is a result of it. This is different to most commoditised foods which hark back to traditional times of Edwardian agrarian food production, pre-war and pre agribusiness which uses imagery of farm life and culture country living as separate from cities and without the truer description of feed lots and factory farming. One does not see images of planes spraying Glyphosate over wheat crops to ready them for harvest, nor

¹⁰ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p5.

¹¹ Kohn, E. (2013). *How Forests Think*. Berkley: University of California Press, p5.

¹² Paxson, H. (2012). *Life of Cheese: Crafting Food and Value in America*. Berkley: University of California Press.

does one see images of de-beaking on packed meat. We see words such as “Natural” and “Fresh” to denote foods, yet the systems that produce these foods are a far cry from the systems that allow the animals and plants the agency experienced in the unfinished commodity. The story that we are “told” on the packaging becomes a fabrication of the truth, a fictional country sunrise possibility of the every chicken, or every farmer. Essentially not real, it did not really happen. How this story differs in the unfinished commodity is that the variables are greater and the same may be said for most fermented foods, the outcome may differ slightly because of story of the unfinished commodity, a story based on tangible truth.

In her article, “Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States”, Paxson opens with a description of how the U.S. population “live in a Pasteurian world”, from antibiotics, home cleaners to ultra processed foods. Control waged upon variability, a conformity imposed to monoculture our homes, foods and the ecosystem that is the human body. Yet pathogenic risk is great, food contamination and severe illness is a plausible hazard. As Paxson says, “Post-Pasteurianism takes after Pasteurianism in taking hygiene seriously; it differs in being more discriminating.”¹³ Post-Pasteurians “move beyond an antiseptic attitude to embrace mold and bacteria as potential friends and allies”¹⁴ or as “our ancestors and allies”¹⁵, as Sandor Ellix Katz, fermentation revivalist, likes to call the invisible micro-organisms that inhabit our world.

¹³ Paxson, H. (2013). Heather Paxson, Winner of the 2013 Forsythe Prize on Post-Pasteurianism. [Blog]. *Platypus, the CASTAC Blog*. Available at: <http://blog.castac.org/2013/08/heather-paxson-winner-of-the-2013-forsythe-prize-on-post-pasteurianism/> [Accessed 29 August 2016].

¹⁴ Paxson, H. (2013). Heather Paxson, Winner of the 2013 Forsythe Prize on Post-Pasteurianism. [Blog]. *Platypus, the CASTAC Blog*. Available at: <http://blog.castac.org/2013/08/heather-paxson-winner-of-the-2013-forsythe-prize-on-post-pasteurianism/> [Accessed 29 August 2016].

¹⁵ Ellix Katz, S. (2016). *Welcome to the Wild Fermentation Portal*. [online]. Available at: <http://www.wildfermentation.com> [Accessed 30 August 2016].

Paxson calls out the politics imposed in the entanglement of the microbiome, between Pasteurians and post-Pasteurians but mostly because of regulations, saying that “microbiopolitics offers a way to frame questions of ethics and governance.”¹⁶ The stigma (and subsequent laws and by-laws found around the world, South Africa included) around raw milk has quickly been entrenched in the culture of many who subscribe to mostly processed foods as their daily food intake. Raw milk is often seen as dirty or contaminated, “generally considered to be of higher risk due to its potential as a carrier of harmful bacteria not normally associated with pasteurized milk.”¹⁷ The stigma is most likely built up by industrial milk quantities that fall into the categories, “packed unpasteurized, retail bulk pasteurized and unpasteurized milk, which continuously indicate a negative compliance rate in critical food safety standards.”¹⁸ Raw milk production should never really be done with herds larger than about 40, as Paxson describes in *Post-Pasteurian Cultures*¹⁹. Milk SA, South Africa’s Corporate Dairy Industry (self-proclaimed “The Organized Industry”) voice, recognises that the negative compliance rate of raw milk is “mainly due to poor control measures and the unlawful sale of substandard milk to the end user.” Paxson states that “contamination is a matter of human agricultural practice, it is not in the ‘nature’ of milk”²⁰ and this is reiterated by Milk SA,

¹⁶ Paxson, H. (2013). Heather Paxson, Winner of the 2013 Forsythe Prize on Post-Pasteurianism. [Blog]. *Platypus, the CASTAC Blog*. Available at: <http://blog.castac.org/2013/08/heather-paxson-winner-of-the-2013-forsythe-prize-on-post-pasteurianism/> [Accessed 29 August 2016].

¹⁷ Selling raw milk... The Organized Industry’s Role. (2016). *Milk Essay*, vol. 7, no. 1 http://www.milksa.co.za/sites/default/files/milk_essay/ME038%20Milk%20Essay%20March%202016.pdf [Accessed 04 September 2016].

¹⁸ Selling raw milk... The Organized Industry’s Role. (2016). *Milk Essay*, vol. 7, no. 1 http://www.milksa.co.za/sites/default/files/milk_essay/ME038%20Milk%20Essay%20March%202016.pdf [Accessed 04 September 2016].

¹⁹ Paxson, H. (2008). *Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States*. *CULTURAL ANTHROPOLOGY*, Vol. 23, Issue 1, p 33. The American Anthropological Association. http://anthropology.mit.edu/sites/default/files/documents/paxson_microbiopolitics_CA.pdf [Accessed: 29 August 2016]

²⁰ Paxson, H. (2013). Heather Paxson, Winner of the 2013 Forsythe Prize on Post-Pasteurianism. [Blog]. *Platypus, the CASTAC Blog*. Available at: <http://blog.castac.org/2013/08/heather-paxson-winner-of-the-2013-forsythe-prize-on-post-pasteurianism/> [Accessed 29 August 2016].

“The general convention is that while the milk is in the production system of a healthy cow it is considered to be virtually sterile.”²¹ Yet the story that reaches most consumers is that raw milk is unhealthy and is a great health risk. Enter the need for recognition of microbiopolitics, “it concerns the recognition and management, governmental and grassroots, of human encounters with the vital organismic agencies of bacteria, viruses, and fungi. Placing microorganisms such as bacterial cultures and cheese mold at the center of accounts of food politics can show us how public understandings and appropriations of scientific knowledge are reshaping how people think about food, its production, its nutritional and cultural value, and the regulation of its safety.”²²

There are a growing number of small-scale dairy farmers in South Africa²³ who choose to maintain small herd populations and continue to provide healthy and stable raw milk and raw milk products. Paxson extends on microbiopolitics, “to describe and analyze regimes of social management, both governmental and grassroots, which admit to the vital agencies of microbes, for good and bad”, thereby recognising the full potential of all possible microbial reality, from “beneficial microbes like starter bacterial cultures and cheese mold — in addition to the harmful *E. coli*, *Listeria monocytogenes*, and *Mycobacterium tuberculosis* — in accounts of food politics extends the scaling of agro-food studies into the body, into the gastrointestinal.”²⁴

²¹ Selling raw milk... The Organized Industry's Role. (2016). *Milk Essay*, vol. 7, no. 1 http://www.milksa.co.za/sites/default/files/milk_essay/ME038%20Milk%20Essay%20March%202016.pdf [Accessed 04 September 2016].

²² Paxson, H. (2008). Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States. *CULTURAL ANTHROPOLOGY*, Vol. 23, Issue 1, p 33. The American Anthropological Association. http://anthropology.mit.edu/sites/default/files/documents/paxson_microbiopolitics_CA.pdf [Accessed: 29 August 2016]

²³ Small scale dairy farming took a knock post-Independence as the dairy industry moved from co-operative to privatised, particularly with the introduction of Italian multi-national corporation Parmalat. Now farms such as Bloublommetjies, Camphill Organics and Jenny's Farm are able to provide raw milk sold legally as “Pet's Milk”, or labelled as “Not for Human Consumption” to overcome the law against raw milk for human consumption.

²⁴ Paxson, H. (2013). Heather Paxson, Winner of the 2013 Forsythe Prize on Post-Pasteurianism. [Blog]. *Platypus, the CASTAC Blog*. Available at:

Part of my work is understanding the foodways that have fallen in the cracks, the ways of transforming certain plants, animals, insects, even salts, into food that is accessible. It is about how those knowledges have been abandoned or lost, and how to revive them within this Anthropocene. What are the possible gaps within our understanding of how people could access food in this current time? How could rebuilding the home pantry be a tangible solution to food security? The connection between peoples tradition and ancient knowledge in food practise and progressive interpretation, adaptation and survival instinct that keeps this information, or knowledge, afloat. An example of this may be expressed through Daniel Chang's (chef-owner of Momofuku restaurant) interpretation of Japanese cuisine in New York. At his 2014 WIRED by Design talk²⁵, "Designing Flavour Through Failure", Chang describes Japanese cuisine to be fundamentally about freshness and thus local availability, therefore the food is about "honouring the local terroir". He interpreted these "mysterious foods" such as miso, soy sauce and dashi ferments and began to deconstruct and recreate them in his Culinary Lab. He realised that these foods needed to be created from local New York state grains and legumes while keeping the integrity of what Japanese gastronomy provides uniquely to the world. This kind of substitution means having specific understanding of the styles and ways of fermentation, this only happens after researching, experimentation, processing, sometimes failing but also succeeding. Fermentation is the "biocultural hope"²⁶ of food transformation (within the broader food system of systems), evoking very specific stories and recipes from all over the world, connecting people directly with the hugely biodiverse multi-species communities, the fungi, yeasts and bacteria that make jars sing and hiss on shelves around the world.

<http://blog.castac.org/2013/08/heather-paxson-winner-of-the-2013-forsythe-prize-on-post-pasteurism/> [Accessed 29 August 2016].

²⁵ As seen through his WIRED article, "The Unified Theory of Deliciousness"

http://www.wired.com/2016/07/chef-david-chang-on-deliciousness/?mbid=nl_71916_p3

²⁶ Eben Kirksey, S. and Helmreich, S. (2010). The Emergence of Multispecies Ethnography. *CULTURAL ANTHROPOLOGY*, Vol. 25, Issue 4, p 545.

Fermentation goes through very specific stages as different populations of species engage with the food substance, be it cheese, cabbage, wheat flour and water or rice. This process takes time, from a few days to a few weeks and sometimes a good few months. It becomes synesthetic as the senses pick up the differences within the process²⁷; changing colours, change in weight or shape and almost always the change in smell. These smells we find all too familiar, from sulphurous to smelly sock odours, bodily process kind of smells. As Michael Pollan says about cheese smells, “we are attracted and repulsed at the same time²⁸”, and it is because of the close relation of *Brevibacterium*, that inhabit certain cheeses and human feet, these microbiota finding evolutionary connection between our feet and foods that we may eat.

Fermentation is an alchemical art²⁹ that is continuously intriguing for me. Heather Paxson describes the cheesemakers she conducted research with as having a sense of “wonder and awe”³⁰, particularly at the moment milk separates into curds and whey in the cheesemaking process. This is true for many of the brewers, bakers and general fermenters I’ve had the honour of working with over the years. It is this sense of awe that perpetuates inspiration and hope, maintaining the relationships within the social arena’s of multi-species practice, with the microbiota as well as with those who engage and consume

²⁷ “That feel is metonymic for knowledge generated through nearly all of the senses – sight, smell, touch, taste. Subjective, sensory knowledge is required to make objective knowledge work in craft practice, which is why excellence in artisan skill is described in terms of virtuosity rather than expertise.”

http://anthropology.mit.edu/sites/default/files/documents/paxson_art_and_science_of_cheese.pdf p118

²⁸ Interview on Vimeo: Agapakis, C. and Tolaas, S. (2014) Artisanal Cheese [video]. Available at: <https://vimeo.com/87923868> [Accessed 26 August 2016].

²⁹ Paxson goes into the detail of the craft of milk fermentation, “what it means to negotiate art and science.” in The ‘art’ and ‘science’ of handcrafting cheese in the United States.

http://anthropology.mit.edu/sites/default/files/documents/paxson_art_and_science_of_cheese.pdf

³⁰ Interview on Vimeo: Agapakis, C. and Tolaas, S. (2014) Artisanal Cheese [video]. Available at: <https://vimeo.com/87923868> [Accessed 26 August 2016].

the food³¹. The most important element within this work is the environment to allow the flourishing of certain bacteria, yeasts and fungi over others, creating the ideal foods that are being intended, what Pollan calls an “ecosystem of health”³².

The humility and lessons learnt through this multi-species work has taught me a particular sense of patience. The processing of foods and then subsequent storage while the microbiota proliferate, subside and settle, require focus and careful strategy. Salt ferments generally mean a longer timescale than sugar ferments. Sugar ferments a lot faster and requires more input, stirring or agitating, whereas salt ferments need stillness. Time in salt is slow and steady, time in sugar is short and unsettled. Recently I’ve started adding fermentation as a necessary process to most of the transformed foods I work with, starting with atchar. Working with the fruits and spices in new recipes, chopping and packing, salting and submerging transports me to my grandmothers kitchen which I only have memories of as a very young child before she passed on. This connection I had not experienced before. This is often the case with foods and a reason why recipes persist for many generations. Nostalgia connects us deeply to memory, to history, enlivening the past to the current times, where the DNA of the species we work with and consume meet our DNA, as Salman Rushdie puts it in his *Midnight’s Children*, “Memory, as well as fruit, is being saved from the corruption of the clocks.”³³ Time is a lesson well learnt through the processing of food.

³¹ After years of fermentation, its only recently that I’ve realised Meisie, a dog, loves eating certain ferments too.

³² Interview on Vimeo: Agapakis, C. and Tolaas, S. (2014) Artisanal Cheese [video]. Available at: <https://vimeo.com/87923868> [Accessed 26 August 2016].

³³ p.38 Rushdie, S. (1997). *Midnight’s Children*. Toronto: Vintage Canada.

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