



Tantalized Fruits: Assembling the Serendipitous Aftertastes of a Most Delicate Industry

Review by Elin Linder

Guthman, Julie. *Wilted: Pathogens, Chemicals, and the Fragile Future of the Strawberry Industry*. Oakland, CA: University of California Press, 2019.

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Julie Guthman's recent book *Wilted: Pathogens, Chemicals, and the Fragile Future of the Strawberry Industry* is a thought-provoking examination of the entangled natures of specific geographic, historic, economic, social, and material conditions that have led to the Californian strawberry industry becoming as fragile as the berry it produces. The research is empirically founded on primary data based on interviews with growers, workers, industry representatives, and scientists, and on secondary data pulled mainly from relevant historical, geographical, and anthropological research. To unfold the manifold forces and entities by which strawberry agriculture is made up, but not necessarily acknowledged, is key to the analytical and theoretical project of Guthman. Hence, she draws on contemporary scholarly works dealing with human and more-than-human analysis in general, while making good use of the concept of *assemblage* in particular. The argument that industry practitioners lack assemblage-thinking colors the analysis throughout, and it is significant in addressing everything from land-use to labor conditions alongside other aspects impacting the current-day becoming of the industry. Assemblage-thinking is identified as particularly useful in denoting the instrumental ways in which pathogens, in the name of agricultural science, are conceptualized and conversely harmfully and unproductively managed. The analytical framing is maintained as a productive perspective to understand how particular human and more-than-human actors and agencies relationally have contributed to contemporary challenges of low fruit quality, uncertain production yields, labor-shortage, and uncontrollable and costly pathogen outbreaks. According to Guthman, employing assemblage-thinking in practically approaching pathogens would considerably alter business-as-usual and bring about more aptly founded and lasting solutions.

Guthman's research is multilayered yet straightforward in showcasing relational particularities at work in producing strawberries in past and present times. The book is therefore intriguing both for readers who are familiar with the subject matters and analytical framings at hand, as well as for those wishing to expand their perspective. It is a worthwhile read for people interested in assemblage-thinking in general, and for those interested in agrichemical processes, workings of a global food system, labor conditions, particular regulatory practices, and infrastructural and institutional premises in particular.

The book features eight chapters, excluding prologue and conclusion. Each details a specific subject matter of interest for the overall project, yet “the story of the pathogen” (25) runs like a read thread through them all. The introductory chapter is dense and carries out a broad-ranging discussion of the issues at hand, how they came into being, their interrelatedness, and how they in the book are theorized. The reader here gets a sense of the different macroclimates and microclimates through which the industry has become fragile. The reader is also made aware of Guthman’s somewhat capitalism-critical framing, and it is stated that growers today rather are businessmen than farmers (11-12). It is noted how practices of year-round production is one contributing factor to contemporary challenges, but also how the adaptability of the crop and breeding programs have impacted the whole industry positively at first, but to later benefit only a few stakeholders. The chapter situates key matters, such as the chemical practice of fumigation, within more-than-human analytics and science and technology studies (STS) and denotes the practices and processes that have evolved from advantageous to hazardous for the industry.

Chapter 2 tunes in on the emergent, situational, and conditional becoming of diseases within the strawberry industry. It is in this chapter accentuated how three soil pathogens were scientifically conceptualized as pathogenic and responded to accordingly by means of fumigation (37, 38, 50). While the three pathogens by no means were the only pathogens posing threats to the strawberry production at the time of their respective emergences, they were through particular scientific trajectories framed as particularly threatening. Guthman tells this side of the story through historical accounts of the three pathogens and through that of fumigation. By intersecting these aspects, she demonstrates how the lack of attention to the assemblaged nature of pathogens—that is, to the relational and interactive conditions that pave way for their existence—has led to the instrumental practices of growers and scientists to simply manage pathological effects, rather than to *understand* their foundations. This, Guthman maintains, represent one major (pathological) cause to the fragility of the contemporary industry. While not explicitly expressed, echoed in the text is the question of whether the industry would suffer the stress that it does today, had human actors paid closer attention to the intra-acting assemblages advancing in the microclimates that the rows of crops constitute.

Following suit her historical accounts in Chapter 2, Guthman spatiotemporally contextualizes trajectories leading up to current-day challenges within the Californian strawberry industry in the subsequent chapters. Chapter 3 specifies a genealogy critically examining the hybridization, commodification, scientific, and institutional enterprises that breeding programs inhere. While the chapter revolves around the “exceptional heterozygosity” (53) of strawberries, them being greatly variable breeding wise, it comprehensibly documents how stakeholders—growers, breeders, scientists, and shippers—instrumentally neglected pathogen resistance for prioritizing qualities enhancing productivity, sellability, and shipability. Interestingly enough, considering the food crop that strawberries are, nutrition “never became a breeding priority” (71).

The cultivation practice of fumigation, which is one denoted as foundational to the workings of the industry, stands as a backdrop in Chapter 3. It is however foregrounded in Chapter 4. Here the reader gets to know about chemical-technological backgrounds, developments, usages, advantages, serendipitous effects and threats. Regulatory aspects and how informants correspond to them are also detailed in this chapter. Importantly, Guthman’s stance to the subject matter is voiced, as she convincingly states the need to “understand chemicals as

functional and relational” (100), rather than as distinct non-interactive and non-transformative compounds. Chapter 5 adds to the socio-materialist exposition and assemblage thinking with which the work is concerned, and the strawberry industry entrenched. Land, at once a material and monetary resource, a concrete capital for farmers and a speculative one for financial investors, is in this chapter surveyed as a means of *use* and *exchange*. Essentially, it is examined as yet an erstwhile advantage which through the complex workings of material substances and institutions of properties has inverted into a threat for the future of the industry.

In a similar vein as the previous chapter enhances political-economic sides of (interactive) things, Chapter 6 speaks to labor shortage and labor power relationally to that of working, pricing, and field conditions. It also considers immigration policies and how such aspects pose challenges for the industry. This analysis is capitalism-critical in its tone. Meanwhile, it portrays laborers as the “socioecological elements of an assemblage” (146) that they, together with all other bodies at work, indeed are. Chapter 7 concerns production, marketing, and shipping arrangements. Once again trailing historical accounts of how certain conditions of the industry came into being, Guthman showcases the winners and losers integral to contemporary production climates of an industry in crisis. She concludes that there are the big businesses, such as that of the key-player Driscoll, that will thrive in times of an almost inevitable shakeout, as they are at least risk considering all challenges with which the industry is faced; be they ecological or economical. Guthman ends in Chapter 8 with a future-oriented analysis of what might be done in converting concurrent threats into possibilities. She here specifies the difference that social and financial capital entails for different producers in adapting to the future of the industry (191) and concludes by making ethical claims with regards to both the climate and to the working immigrant bodies taken advantaged of in the production of a most tantalized fruit—the strawberry.

Author Bio:

Elin Linder is a PhD Student in the department of Social Anthropology at Stockholm University. She is keen to explore human and more-than-human interrelatedness and has a particular interest in unfolding the socio-material workings, value landscapes, and situated practices and knowledges through which particular human and more-than-human assemblages materialize in time and space. Linder’s doctoral research project examines the interplay between people, material matters, discourses, and practices as it unfolds in the world of *olivicoltura* in the region of Apulia, the heel of Italy. The project employs sensuous ethnography and centers on a socio-material-historical analysis of the everyday practices and processes by which Apulian olive oil becomes an emblem for deeply rooted legacies as well as a natural resource and a commodity.



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