

"Quo Vadis USA?" – Der Podcast des Heidelberg Center for American Studies

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"Arid Empire: The Entangled Fates of Arizona and Arabia – A Book Talk with Natalie Koch"

Natalie Koch, University of Heidelberg

Anja Schüler: Hello and welcome to a new edition of the HCA Podcast, coming to you from Heidelberg University, my name is Anja Schüler. We will be talking about deserts today, which for many of us are mythic spaces or maybe just empty wastelands. Deserts, however, can also be crucial political spaces and sides of imperial aspirations. That is the argument put forward in *Arid Empire - The Entangled Fate of Arizona and Arabia*, a book by Natalie Koch that is hot off the press this month. Natalie Koch is a professor at the Institute for Geography here at Heidelberg University, and she is my guest on the HCA Podcast today; welcome.

Natalie Koch: Thank you for the invitation.

Anja Schüler: So, before we delve into your book, please tell our audience a little more about yourself. You have just started your tenure as a professor of human geography here at Heidelberg University at the beginning of this past winter semester. What is the focus of your work as a Geographer?

Natalie Koch: I'm primarily identifying as a political geographer but, I guess, in the broader sense, also as a human geographer. Most of my research focuses on bigger questions of geopolitics: identity, politics, the state systems, and, as I would say, a major focus on authoritarianism. Empirically, most of my research is centered on the Arabian Peninsula now, although previously I was working on central Asia. Also, I think much of my research on authoritarianism was forced after living in the United States during the Trump presidency and, even before, forced me to look much more closely at American society and American structures. I got interested in U.S. connections with other parts of the world and U.S. relationships with other authoritarian systems. So, in the broadest sense, much, much of my research is looking at questions of empire and authoritarianism together.

Anja Schüler: I just mentioned in the introduction that your new book, *Arid Empire*, is just out. What prompted you to look at the entangled fates of Arizona and Arabia, as you call them in the subtitle?

Natalie Koch: I grew up in Tucson, Arizona, and because I always understood my personal identity as connected with the desert of Arizona, of Southern Arizona, I had not ever considered

looking at politics within the state myself. So, I started traveling and doing research in different deserts of central Asia as well as later the Arabian Peninsula. It was always filtering those fieldwork experiences in the international sense through my understanding of the political and practical significance of deserts in a place like Arizona. So, I always had that perspective in mind, but I never really thought to interrogate those exact connections. Then, in 2014-15, I heard the first news story about this Saudi Arabian company that had purchased a farm in Arizona. My immediate reaction at the time was that I thought: Oh okay, I remember hearing about these wasteful agricultural practices like growing cotton and that this was something that people were trying to stop. I hadn't gone back and looked at those questions of what was happening with agriculture and the state at the time, so I was totally shocked that a Saudi farm would still be something happening in 2015 in Arizona. That was the first spark of my interest in looking at these connections, and then it just spiraled. I work in the Arabian Peninsula, Oman, Saudi Arabia, Qatar, and all these places. I just kept finding more and more connections with Arizona as I started to actually look at those connections. It's not something that you would necessarily just be aware of as a general person, but I think because I had already been specializing in Gulf Studies and was from Arizona, this is what led me down the rabbit hole of trying to uncover all of these connections between the places.

Anja Schüler: So *Arid Empire* is the overarching concept that connects the parts of your book. Can you elaborate a little bit on that concept?

Natalie Koch: I think the place to start with this concept is with the history of when the United States acquired these vast desert landscapes because I think many, many Americans and many people in general tend to forget about how recent the territorial expansion of the United States actually was. So, it wasn't until the 1848 Mexican-American War that a huge swath of territory, of what we now think of as California, Arizona, New Mexico, and Nevada, all of these desert places in the U.S. Southwest today, were added at that time. The challenge for a lot of the early settlers and colonialists in the United States was that they didn't know anything about the desert per se – the U.S. was established as a country on the East Coast, where there were just very different practical questions. So, from quite early on, the people who were put in charge of taking over this territory, and specifically the Department of War was one of the major forces in this, had to figure out how to physically reach distant parts of the territory and how to set up army outposts, for example. They struggled with this quite early on, so the general challenge of colonizing this land is essentially where my book and the bigger questions about this start. I think one of the things that many people know about the colonial history of the United States is that there were a lot of people who were informed by Christian identities. Christian values are this whole sort of biblical logic, but it also brought into how the settlers were thinking about deserts. So many people knew nothing practically of the desert, but they had all these imaginaries about the desert from those tales within the Bible. Those who were then thinking about how to take over this new world desert immediately started to think about the old world deserts from that biblical recollection. As these people were people within the U.S. government

and in different branches of the effort to colonize the territory, they immediately started to look to the Middle East as a way to help develop this project of taking over the land. They started importing lots of things: animals, plants, different types of water, irrigation projects, for example. That's the kind of domestic "arid empire" that I start with because, as I said, I'm primarily a Gulf Studies scholar. A lot of people talk about U.S. empire in the Arabian Peninsula, but they talk about it almost exclusively around war or oil. The point I want to make in the book is that there is a much longer project. That U.S. empire that goes in and starts to become present in the Arabian Peninsula is built on those same networks and those same logics of the sort of arid empire in the U.S. Southwest. So, I'm trying in the book to tell the story about how you have that domestic empire project that then sort of works and becomes a project of international imperialism – of a U.S. Empire in the Middle East.

Anja Schüler: I think the processes that you have just described in your book are called "desert-to-desert learning," and the examples you give in your book intrigued me as a historian. For example, you mentioned in a passage the infatuation of the U.S. military with camels as a means for transportation in the American desert, in this land that the United States acquired and didn't quite know how to handle it. So, they brought in camels from the Middle East; this was before the Civil War in the nineteenth century. Another example I would like to discuss is the 1942 American agricultural mission to Saudi Arabia, which, as we can learn in your book, was a goodwill mission during World War II. There is an exchange of desert knowledge and desert-to-desert learning. What kind of desert knowledge did Americans import from the Middle East, and what kind of knowledge did they, amazingly enough, export there? Maybe you can give some examples.

Natalie Koch: Sure, the camels are a great first example of that. I won't go into too much depth on this, but it's just a fascinating project where Jefferson Davis, who was the Secretary of War at that time, in the 1850s, got sold on this idea of bringing in camels to help with setting up military outposts in the desert Southwest and thought that this would be a much more efficient way of establishing a military presence. The project was abandoned when the Civil War started, but it lived on in a lot of ways, in the sense that the camels were seen as a great example of how a different species that we didn't have in North America is used to help with the U.S. colonial project. I think a lot of the book talks about different agricultural connections because, of course, the major question in an arid landscape is the question of water. There's a lovely quote from a scholar that I often think about, and she writes that colonialism is, after all, an agricultural affair, and really, this was a major challenge, just in terms of food production but also how to get white settlers to come to live in the U.S. Southwest. But here again, if you don't know how to farm in a desert, how are you going to figure that out?

And this was where a number of different actors, including from the University of Arizona, which is a major part of the study of the book, which was involved in helping to set up an agricultural experiment station, helped local farmers learn how to farm in the desert and

importing different plants – different varieties of plants, like date palms, helped to establish commercial agricultural processes in Arizona. They very quickly excel at this in a way because they are also able to engineer lots of new waterworks by, of course, taking indigenous water that was stolen from the indigenous tribes in the Southwest. But harnessing that through a lot of technological innovations and groundwater pumping became an important part of that. So, by mastering desert farming and mastering control of these water landscapes, they started to send various experts from the University of Arizona, but also others that were supported by the U.S. State Department, back over to the Middle East.

You mentioned the 1942 agricultural mission to South Arabia; this is interesting. There's one particular figure who is a key player in all of this: Carl Twitchell was his name. Most people just sort of remember him as this royal advisor, he became an advisor to the Saudi Kings back when he first went to the Arabian Peninsula in the 1920s, but he actually lived in Arizona before his first trips to the Arabian Peninsula, and he saw very early on in his relationships with the Saudi Kings that he could use that story of "this is how we do it in the Southwest" and selling that to the King as if there was a kind of special expertise. Twitchell was very much an entrepreneur, and he then did a really good job of selling that knowledge of what the Saudi Kings were interested into to the State Department. This was unfolding in the 1940s, and of course, at that time, the U.S. government was interested in Saudi Arabia for its airfields. They wanted to be able to land planes in Saudi Arabia, and the King did not want that. Twitchell got in the middle of this and started saying the King has this obsession with this farm of his, and why don't we try to build this goodwill by helping him develop this farm? So, he is able to get the State Department behind a number of these projects, and even at this point, even in the Saudi case, they are reexporting a number of date varieties that were originally taken from the Arabian Peninsula, "perfected" in the Southwest and then return to that farm project. This continues through a huge series of projects, including from the University of Arizona in the United Arab Emirates, what is today the United Arab Emirates. Even before it became independent in 1968, when the British were still technically the imperial power present there, they were already enlisted to develop a big agriculture project in Abu Dhabi. It's kind of this repeating pattern that I noticed in the research, where desert farming and special expertise and managing water in the desert becomes a keyway that these people from Arizona position themselves as experts who have something to sell back to the Arabian Peninsula, and it just continues to today.

Anja Schüler: The import of knowledge into Arabia does remind one of what was happening in the oil industry in the first half of the twentieth century.

Natalie Koch: Absolutely, this is one of the things that's so fascinating about this: A lot of these projects get tacked on to an interest in oil. So, the U.S. government, for example, was not interested in supporting Saudi agriculture, but they were interested in creating opportunities to search for oil – if you're searching for water by drilling wells, you could be searching for oil. It was a way of softening this very narrow interest that they had, as well as on the military side. So,

in looking at some of these agriculture projects, you see how they then become the special space for those negotiations. The U.S. government was doing this from very early on in the region, and I think even the project that I just mentioned is fascinating because, as I said, it started in 1968, and the crucial states were part of the British Empire. At that point in time, we often just think that once the British pulled out in 1971, then it transitions to a different American Empire. But that process started much earlier, and again, this idea that it's coming in through something more innocuous, less threatening like the support of the agricultural project – which was, of course, always much more than that.

Anja Schüler: That's a fascinating story, but I would like to fast forward a little bit and maybe talk about yet another chapter of your book, the one dedicated to science projects in the desert. Especially Biosphere 2, which many of us remember, explored how mankind might meet an ecological catastrophe. But to those of our listeners that are not quite that familiar with that project, can you explain to us what it is or was and how projects like it relate to your concept of "arid empire"?

Natalie Koch: So, I should first say I don't remember if this ended up in the book or not, but I visited Biosphere 2 the first time when I was seven years old and my father took us. This is burnt in my memory. It was essentially this big complex just outside of Tucson, which is my hometown, and the idea of it was to replicate Biosphere 1 on earth. The idea was to recreate the conditions of a closed system, as if Biosphere 1 is a closed system. We don't get anything inside from outside; we sustain ourselves on earth. It was just supposed to be a miniature of this. Practically speaking, though, it was just an oversized greenhouse, and it represented all the different biomes on the planet, and they were supposed to have a self-sustaining closed environment. The other part of this oversized greenhouse project was that they were going to run these human trials, and they ran two of these human trials in the 1990s, locking in a team of eight people. I think the first product ran for just under two years. They were locked in and were not allowed to take any resources from outside. It was supposed to test the ability to live in this controlled system. When I went, that was during the first human trial project, and I remember just looking inside at these people that were locked in, and I found it so bizarre. I certainly didn't understand it at the time.

So, it was fascinating to excavate that history for the book, and frankly, I tried to avoid it as I was doing this research because I knew that it was very closed, very secretive, and massively corrupt, and I didn't think I was going to get too much information on it, but I did. But in short, the closed nature of it was because it was always a sensational type of project, and it was run by several people, one of whom was a cult leader. He had his own cult in New Mexico before they came to run the Biosphere project. Several of those cult members were brought in as the first biospheres who were locked in that first human experiment. The idea of this project was just a scam; they weren't locked in a closed system. They had secret food; there was oxygen pumped in – all these things. But it was a big spectacle of preparing for the environmental collapse and

that we need to engineer our way out of. Their goal was to show how humans could evolve off the earth, and Biosphere 2 was supposed to be an advertisement for how they could technologically achieve that.

The other important part about this, and how it connects to *Arid Empire*, is that it's very much built on the idea of the white settler vision of the apocalypse. This is a little bit harder to read sometimes. Still, many indigenous scholars, especially indigenous geographers, have emphasized how the ways that we talk about environmental apocalypse today ignore the fact that for many indigenous people the steal of land and resources that were stolen with the colonization of North America was the apocalypse for them. In these spectacular scientific projects in the desert, it tends to erase the violence of colonialism and the fact that this colonial system is also built on intense resource extraction, which has gotten us to the point of environmental problems and climate catastrophe, for example. I think what is fascinating, then, about the present is what's happening at Biosphere 2 now. There's lots in the middle of what I've just described, but I'll leave that out for now. At present, they are hosting a lot of efforts to develop scientific projects for colonizing Mars, which is pretty logical in a lot of ways. But you know this in a lot of discussions about Mars and preparation for the environmental apocalypse on earth of just getting ready and they think about Mars as Planet B. Of course, many of us are trying to say there is no Planet B, but that's the general way that Mars is being talked about. That is a colonial vision of extracting until there's a collapse, and we'll just find Planet B. Of course, it's only the privileged who get to leave – you see this very clearly with the billionaire space race. But it's those same people that are using those same tropes of the desert and Mars as a blank slate, and we can just all solve all of our problems by engineering our way out of the crisis if we can just make it to Mars.

Anja Schüler: And then there is a school of thought that thinks we can engineer our way out of the climate crisis by putting away carbon dioxide beneath the surface of the earth To wind down our conversation, I would like to return to the big picture once more because, as I said before, I'm a historian, and I was just absolutely intrigued by what I learned from your book about desert learning and desert diplomacy, and that both reaches back almost two centuries. There are some real implications of that history for today, most notably the fact you mention earlier that in the worst drought Arizona has seen in the past century, a substantial amount of its groundwater is going to [agricultural projects run by] Saudi Arabia. If you wonder how that can happen, it happens via alpha alpha, grown in Arizona. So, what can you tell us about that? And what implications does this have for Arizonan agriculture and U.S.-Saudi relations?

Natalie Koch: The Saudi example is a fascinating one, and the project, as I said, got sparked by this interest. What I originally thought was that I was going to just focus on the contemporary connections, and then I discovered that it had this much deeper history. I've struggled in some ways to figure out how to explain that history matters in a number of ways. But the fact is that both Arizona and Saudi Arabia have had an incredibly unsustainable approach to agriculture, and

that approach has been built on essentially depleting its groundwater reserves. I keep thinking about the way that the Saudi Energy Minister recently talked about how they were never going to stop drilling for oil, that they were going to drill to the last drop. This attitude prevails in Saudi Arabia and Arizona about its groundwater – they’re just going to drill till the last drop. So, there’s been a lot of reporting about this Saudi farm in Arizona, in the past year in particular, where investigative reporters at the Arizona Republic and other sources have found that there were a lot of potentially illegal terms that were given to the Saudi Company, Al Marai, that is owning this farm and sending its alpha alpha back to the Saudi Cows. Fortunately, we can say that in some way, in the elections last year in 2022, Arizona voted for a new Attorney General and a new Governor. Kristin Mayes is the new Attorney General, and Katie Hobbs is the new Governor – they are both Democrats, and they both took office in January. They built their campaigns on the groundwater issue and very vocally said they were going to try to kick out the Saudis. They’ve already taken action on that since coming into office just a couple of weeks ago, so it is great to see that in some ways.

The point that I’ve been trying to make within the Arizona media and elsewhere is that it is not sufficient to just kick out the Saudis, which has become a convenient political talking point. But the fact is: Arizona’s groundwater laws are completely broken because they’re built on this logic of drilling to the last drop. I hope that, in a lot of ways, they start to think about this more broadly. The other point that I have struggled to do research on, and I want to do much more on this in the future, is that I think there are a lot more connections between the United States and the Arabian Peninsula related to water, which is not just about food. It’s about the inconvenient things that the U.S. often does not want to look at, which is the military and defense machine. The U.S. is very much a garrison state, so many places are dependent on the industry. My hometown of Tuscon is home to Raytheon Missiles, and Raytheon Missiles is this engineering giant which makes a lot of missiles, and those missiles are getting sent to Saudi Arabia. The *New York Times* had a fantastic way of reporting tracking these missiles being developed in Arizona and sent to Saudi Arabia, which are then being used in the war in Yemen. Some of these questions, I think, are uncomfortable for politicians in Arizona to address. But Raytheon uses a lot of Arizona water too. So why are we so anxious about sending out alpha to the Saudi cows when we’re also sending missiles to Saudi Arabia, which are being used in the war in Yemen? I think some of these questions about the military and defense establishment within Arizona are incredibly important to consider, and it also brings us back to that longer history of how U.S.-Saudi relations have been built on these ties to military questions.

Anja Schüler: Entangled fates indeed, on so many levels. Thank you so much for these insights, Natalie Koch from Heidelberg University’s Institute for Geography. We had a fascinating conversation about *Arid Empire: The Entangled Fates of Arizona and Arabia*. I will say that this book is a great read, I truly enjoyed it, and Natalie, we will continue this conversation on February 2, when we will welcome you and a number of guests to discuss *Arid Empire* here at

the HCA. If you would like to join us, please check our website for details. I will see you next week and thank you for being on the show today.

Natalie Koch: Thank you again for the invitation.

Anja Schüler: That wraps up the current episode of *Quo Vadis USA?* My name is Anja Schüler. Our podcast is produced at Heidelberg University with support from the Jacob Gould Schurman Foundation. As always, I would like to thank Eléna Brandao Mecker for technical support, and I would like to thank you for listening. In the next episode, I will be talking to Soledad Avarés Valesco from the University of Illinois at Chicago about the dynamics of migration from Latin America to the United States, especially the movement of unaccompanied and undocumented children. So, stay tuned, and please stay healthy.