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Inventing Hoodia: Vulnerabilities and Epistemic Citizenship in South Africa

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# *INVENTING HOODIA*

## VULNERABILITIES AND EPISTEMIC CITIZENSHIP IN SOUTH AFRICA



***Studying Hoodia patent law struggles reveals how sovereign power, in the service of neoliberal bioeconomies, values some forms of knowledge over others.***

**H**oodia gordonii is a succulent plant known for generations by the Indigenous San peoples in Southern Africa as a source of water, food, and energy during times of low food supply. But in 1996, South Africa's Council for Scientific and Industrial Research ("CSIR") obtained patent rights to Hoodia's P57 compound with the hopes that they, in partnership with Pfizer and eventually Unilever, could develop Hoodia for global commercialization and sale as an anti-obesity product. The plant took on further significance in 2003 when the South African San Council entered into a benefit sharing agreement with CSIR for 6 to 8% of the revenue from the potential sale of Hoodia. Monies were to be placed in a Trust for all San peoples across Southern Africa. Meanwhile, patents on Hoodia signaled its value, generating a profitable herbal supplement industry devoted to selling the plant for weight loss. Sold through the Internet, the botanical market for Hoodia employs stereotypical images of seemingly "modern" white western women bodies in relation to "traditional" San male hunters, while placing U.S. female consumers in relation to San female producers of Hoodia knowledge.

In studying Hoodia patent law struggles, I am interested in how sovereign power, in the service of neoliberal bioeconomies, values some forms of knowledge over others. I examine how techniques of governmentality such as patent

law, benefit sharing contracts, bioprospecting permits, and prior informed consent agreements are being used to structure inequitable forms of citizenship based upon whose knowledge and intellectual labor matters more to the neoliberal project of the nation-state. In particular, I ask how relevant social actors make claims for rights, benefits, and protection under the law based upon a vulnerability to their processes and ways of knowing in order to participate more fully within global market economies. In addition, I examine how social actors articulate, position, and rework concepts of nature and culture as they describe their practices related to the plant in order to secure rights under patent law and benefit sharing legislation.

Furthermore, I explore how these practices of legal claim making involve the production of difference and inequality through the articulation and deployment of narratives of race, gender, and indigeneity. Through these inquiries, I consider "epistemic citizenship" as a way of understanding how the state is producing new epistemic citizens through the creation of novel legal technologies that open up, restrict, and control access to global market participation, while producing new forms of political association. This offers an alternative to scholarly work around patent law, which focuses on the public domain.

Critical intellectual property scholars theorize the "public domain" as a conceptual analytic for

understanding patent law and civil society. Ideas and materials within the public domain are free from property ownership. Some scholars assert that the patenting of DNA sequences restricts scientists' ability to do science, while arguing for an open public domain where material can be freely and openly shared. (Boyle 2008, 2003, Rai and Eisenberg 2003) In contrast, others claim that patents endanger Indigenous communities by threatening their biodiverse resources and cultural heritages, thus a more protective public domain is needed to give them more control. (Coombe 2003, Long 2006, Greene 2004) These debates produce valuable insights, but they often fail to address patent law and society as co-constituted within complex gendered social relations, histories of colonialism, and practices of neo-liberal globalization.

To address these concerns, I employ interdisciplinary feminist methodologies to produce an ethnographic, multi-sited study of how a patented object circulates. (Charmaz 2006, Clarke 2005) Drawing upon feminist science studies, feminist legal theory, and transnational feminisms, I analyze Hoodia as it travels through various spatial and temporal modes such as colonial botanical journals, #Khomani San women's kitchen gardens, small farms, bioprospecting labs, patent specification documents, company web advertisements, and

benefit-sharing legislation. My research also involves thirty-three interviews with relevant social actors including members of the #Khomani San, lawyers, environmental activists, scientists, and government officials. Focusing on the circulations of Hoodia allows me to examine relations of power between individuals and groups in order to account for how San knowledge related to Hoodia is devalued. Through this research I learn that claims for epistemic citizenship involve and depend upon different articulations of nature and culture, while simultaneously producing difference, inequality, and spaces for resistance.

In late 2008 expectations of a financial windfall to the San plummeted when Unilever issued a press release saying that they were dropping all plans to develop Hoodia products. Termination of the program raised anxieties that the benefit sharing agreement had officially failed. Once considered a symbol of hope for San peoples, the Hoodia plant and its benefit sharing agreement were now foundering. Rumors also began circulating that large bulldozers were now terminating helpless, vulnerable Hoodia plants growing in the Kalahari on Unilever sponsored plantation farms. So how did Hoodia change from a symbol of vulnerability to hope, and back again? Hoodia had been constructed as a symbol of biocolonialism by the San to obtain benefit sharing, and with the success of negotiations, it had become a sign of hope for

Indigenous peoples' rights to self-determination. With the fate of benefit sharing now on shaky ground, Hoodia once again emerged as a vulnerable plant in need of protection.

Changes in Hoodia benefit sharing also corresponded with the emergence of new regulatory regimes within South Africa. The protection of traditional knowledge and intellectual property rights had become a nation-building project. South Africa had just passed several pieces of legislation, which created legal uncertainty over patent rights, bioprospecting permits, and benefit sharing. The Hoodia agreement, which began as a private contract with CSIR, was now being re-ordered to meet these new legal regulations and system of governmental management and oversight. Hoodia struggles were thus being re-figured through a new relationship with the nation-state that had become invested in the regulatory and legal control of knowledge in new ways. With this instability, what I found, was that Hoodia social actors, now more than ever, were being obliged to perform what Wendy Brown calls "states of injury" in order to protect their processes of knowledge production. (Brown 1995)

Feminist science studies and feminist legal theory provide useful frames for understanding how vulnerability is deployed, structured, and subverted through regimes of science and law. Adriana Petryna shows how individuals make

claims through new regulatory regimes for inclusion into the post-soviet welfare state based upon their biological suffering from the Chernobyl nuclear disaster. (Petryna 2002) Martha Fineman also suggests a turn towards vulnerability as way to strengthen equal protection analysis currently based upon identity politics. (Fineman 2008) Scholarly attention to vulnerability, however, primarily focuses on a notion of biological suffering and physical vulnerability. Yet, notions of vulnerability are themselves constructed. Thus my project asks how the law structures and grants rights of epistemic citizenship through discourses of vulnerability to ways of knowing and processes of knowledge production.

As South Africa looks to patent ownership to incite medical and pharmaceutical innovations, new forms of epistemic citizenship emerge - whereby corporations and government research institutions can make claims for ownership based upon their vulnerable processes of producing knowledge. Under South African and U.S. patent law, patent owners, such as CSIR and Unilever, are constructed as persons vulnerable to infringement or "piracy" of their inventions. Corporations are therefore assigned temporary monopoly rights over their employees' inventions in order to protect their capital investment for developing scientific technologies. Patent law therefore gives institutions

control over their knowledge production by constructing them as vulnerable subjects. For instance, Hoodia began as a promising plant for Unilever with potential for millions in profits. Clinical trials, however, called into question its safety and likely FDA approval. Thus, in late 2008, during the global collapse of the financial markets, Unilever announced it was terminating the project. Hoodia research, however, had sparked new discoveries as Unilever filed its own patents for producing Hoodia plant extracts. Unilever was thus obligated to articulate its vulnerability in order to secure patent rights over Hoodia properties.

This requires the legal construction of nature into cultural, scientific artifact. A product of nature is not considered patentable subject matter. Ownership rights can only apply to subject matter that is "isolated and purified" and "markedly different" from its form found in nature. To become patentable, the Hoodia plant therefore comes into being as a chemical composition isolated from the plant as a whole. It is codified under the law as life at the molecular level, in a new bioeconomic state of what Nicholas Rose calls "molecularization." (Rose 2006) Hoodia therefore becomes a set of vital mechanisms that can be isolated, manipulated, and recombined through scientific practices of intervention. Hoodia is no longer constrained by its vital order as the cultural

heritage of the San peoples. It is cut and severed from its historical, social, political, and cultural relationships. (Strathern 1996) Hoodia becomes privileged and valued under the law as an isolated and purified chemical composition known as P57.

Epistemic citizenship, as mediated by patent law, is therefore determined by characterizing Hoodia as patentable invention. Through the legal architecture of patent law, Unilever emerges as a more worthy epistemic citizen whose knowledge of how to isolate the Hoodia plant into specific chemical compounds is more valuable for neoliberal market logics than that of the San peoples. By assigning patent ownership to the Hoodia compounds, science in the lab is privileged over Indigenous knowledge of the plant. Patent law thus codifies the technoscientific visualizing techniques of western science that stand in opposition to a feminist objectivity or situated knowledges. (Haraway 1988)

While Unilever was compelled to maintain and enforce its position on Hoodia patents, the San found themselves once again arguing for legal rights to benefit sharing. The private contract between the San and the CSIR was now being re-figured under South Africa's 2008 Regulations on Access and Benefit Sharing. The San were thus obligated to once again construct themselves and their knowledge of Hoodia through discourses of vulnerability in

order to secure their rights. The #Khomani San articulate Hoodia knowledge as vulnerable to injury by scientists seeking to patent and commodify their knowledge. They also describe the plant as “from nature” and as “life.” Through these articulations, Hoodia is positioned as more natural and pure than scientifically manipulated Hoodia. Discourses of naturalization are thus used to construct a binary between what the San know about the plant versus the scientists. This binary enables the San to make claims for protection and benefits over their own unique knowledge of the Hoodia. Constructing Hoodia in this manner is necessary for obtaining benefit sharing and its avenues enabling market place participation. The San emerge as worthy epistemic citizens entitled to benefit sharing rights because they hold a distinct and vulnerable knowledge of “natural” Hoodia.

Yet, in making such claims of vulnerability, the San are obliged to take on the same discourses of naturalization that have historically constructed them as inferior. The San have been historically positioned as “animal-like” and as “closer to nature” through colonial and apartheid discourses in order to justify violence against them (Moran 2009, Dubow 1995). Legal-claim making to secure benefit sharing compels the San to adopt and reinforce these discourses of naturalization. Hoodia therefore

comes into being under the law as static and timeless nature that is vulnerable and in need of protection through benefit sharing. This also results in the erasure of #Khomani San women’s reproductive and intellectual labor as well as the gendered knowledge practices related to Hoodia. For instance, members of the #Khomani San describe learning about Hoodia from their mothers and grandmothers who also use the plant to ease breast-feeding and treat gassiness in babies. It also reinforces the San themselves as traditional and outside of modern discourses of scientific knowledge production. The San therefore emerge as epistemic citizens, but are given fewer rights.

Epistemic citizenship, and the rights it affords, is inequitable. Through the benefit sharing contract, the San emerge as stakeholders in the success of Hoodia’s global production, sale, and consumption. Yet, they lack control over the means of production. For instance, when Unilever stops its commercialization of Hoodia it means that no monies will flow to CSIR for distribution to the San per the agreement. Benefit sharing, as a form of epistemic citizenship with rights to market participation, is therefore structured in unequal ways.

Despite these limitations, benefit sharing is considered a pathway to political recognition. The #Khomani San look to benefit sharing with CSIR and others as a step towards formal rec-

ognition of themselves as Indigenous peoples. Under South African law, the #Khomani and other South African San are not formally recognized or represented within the National House of Traditional Leaders, thus they find it difficult to assert their customary law as a primary source of governance. (Bennett 2004) Benefit sharing is seen as a key step towards gaining political recognition within the National House and more autonomous control over land and resources. Thus, although limited through legal and market-mediated regimes, the San are using benefit sharing, with its hopes for market participation, in counter-hegemonic ways to refigure their relationship with the nation-state. Claims for and grants of epistemic citizenship are therefore being deployed and contested to make space for re-imagining notions of citizenship within the post-apartheid nation state.

One indication that San political mobilization is contesting notions of citizenship, are the increased anxieties among certain groups of small-scale, Afrikaner farmers. Under the new laws, farmers growing and exporting Hoodia to international botanical markets are now compelled to negotiate benefit sharing contracts with San peoples. For instance, the Hoodia Growers Association signed a benefit sharing contract with the South African San Council in 2007. Yet, to protect against a further erosion

of their rights and privileges, they articulate a vulnerability to their knowledge of how to grow and cultivate Hoodia. Such vulnerability claims are made through racialized and gendered narratives, placing male Afrikaner farmers in opposition to San women. This functions to reinforce whiteness and Afrikaner claims to “indigeneity” within the complex social and political orders of South Africa given its colonial and apartheid histories. It is within this particular moment of time, with its uncertainties and tensions, in which these social actors began to articulate renewed claims of vulnerability over their processes and ways of knowing.

In sum, in my research within post-apartheid South Africa, I find the emergence of an epistemic citizenship where individuals and groups make claims for inclusion into the market place based upon a vulnerability to their ways of knowing and processes of knowledge production. Inclusion into the market place, and its pathways to political recognition, is determined by how nature and culture are characterized. Epistemic citizenship also shapes and is shaped by relations of gender, race, and indigeneity. Patent ownership reinforces the masculinized and racialized scientific techniques and rationalities of science in the lab. San negotiations for benefit sharing work to obscure the gendered knowledge practices related to the Hoodia plant. Yet, at the same time, San claims

for epistemic citizenship, as mediated through benefit sharing, work to disrupt regimes of whiteness within South Africa. These struggles denote a new form of inequitable citizenship based upon whose knowledge and intellectual labor matters more to the neoliberal practices of the nation-state. Citizenship has always been linked to knowledge, but the increased scope and globalization of patent law and ownership in recent decades has made this relationship more explicit. Examining Hoodia patent law struggles provides insights into how claims for and grants of epistemic citizenship function within South Africa as it simultaneously seeks to protect its traditional knowledge, participate within new global economies, and recognize claims for self-determination by Indigenous peoples within its borders.

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