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Reckoning with Subaltern Science: The Case of India's *The Wire Science*

Abstract

In light of the dominance of "Western" scientific discourse in English-language news media, the question arises regarding how and to what extent a prominent Global South-based science newsmagazine such as India's *The Wire Science* positions itself with respect to indigenous cultural practices. Addressing this question, our essay critically examines *The Wire Science*'s "The Science of the Seas" feature series as one form of "subaltern science" stemming from the social hierarchy of caste. We work with the concept of subaltern science as a theoretical hook to show that the framing of the Indian fisherman in "The Science of the Seas" hardly casts him as a viable path for further inquiry so much as an exotic figure with an ancient, and deeply mystical, connection to the sea. Our analysis thus reveals that while the idea of representing subaltern fisher science in the English-language news media is novel, caste hierarchies are inscribed into the story narrative of "The Science of the Seas" in such a way that it prevents subaltern science from fully emerging, thereby reinforcing the primacy of Western science.

Keywords: science journalism, culture, Global South, postcolonial studies, representation, subaltern, environmental humanities

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Introduction

In light of the dominance of "Western" scientific discourse in English-language news media, the question arises regarding how and to what extent a prominent Global South-based science newsmagazine such as India's *The Wire Science* positions itself with respect to indigenous cultural practices.[1] The question of how, precisely, cultural logics are refuted or reinforced by *The Wire Science*'s journalism can be addressed through the array of positions in its coverage of subaltern science, the science produced by "those who have been at the receiving end of hegemonic structures" (Ramapurath Chemmencheri, 2015, p. 7). As White and higher caste Indian scholars holding an anti-caste position, we critically examine news media narratives of fisheries science as one form of subaltern science based, in this instance, on the prevalent social hierarchy of caste.

As a newsmagazine operating from the Global South and catering mainly to the relatively affluent, English-speaking populations, *The Wire Science*'s reportage bears significance regarding the status of local practices and knowledge systems. Useful in our discussion is Mukharji's (2016) examination of the suite of new tools for South Asian medicinal practices and the ways in which Western science originally draws a great deal from Indian practices, tracing back to the first successful rhinoplasty surgery in the nineteenth century. Ayurveda, an alternative local medicinal system monopolized by the higher castes on the Indian subcontinent initially attracted the attention of British physicians who traveled to India to learn rhinoplasty methods (Ambade, 2021). The British *Gentleman's Magazine* then published the results in 1794, initiating a period of collaboration that led to the establishment of the Native Medical Institute in 1815 (Lock et al., 2001, pp. 651-52). Indian instruments

were used and refined in the institute, which eventually taught both Indian and European medicine in 1822. This high point in the history of collaborative science abruptly ended, however, in 1835 with the passage of the English Educational Act, a piece of nativist legislation that championed European methods over local practices (Hardiman, 2009; Mukharji, 2016).

Over a century later in 1947, India's independence sparked new interest in local methods, drawing a new generation of Ayurveda practitioners to establish clinics, which became part of Indian National Healthcare (Hardiman, 2009). Local treatments, however, were not always used in tandem with other medical approaches. National independence inspired not only the re-emergence of Ayurveda, but breathed new life into multiple "Indic" knowledge systems, particularly in the fishing industries. Into the twenty-first century, however, advanced scientific technological tools and methods have increasingly called into question whether and to what extent a mutually reinforcing conception of sciences—particularly as articulated through the press—is possible. Our observations indicate that mainstream English-language news publications in India, such as *The Times of India*, *Hindustan Times*, and *The Hindu*, along with specialized English-language newsmagazines including the Indian Institute of Science's *Kernel*, predominantly document Western scientific practices at the expense of Indic sciences, particularly subaltern knowledge systems like fisheries science.[2] This uneven coverage discourages a pluralistic understanding of science.

This essay presents a case study of "The Science of the Seas" multimedia feature series in *The Wire Science*, a born-digital science newsmagazine and a subsidiary of the Indian news outlet *The Wire*. The traditional compass of "The Science of the Seas" functions to serve local fishing methods, yet in a radically revised way to reflect the uniqueness of wind currents in the southern Indian state of Tamil Nadu. This study of scientific discourse in *The Wire Science* is premised in the understanding that the global circulation of scientific methods

suggests multiple post-Western globalisms whereby the West does not bear a one-way relationship with the Global South (Mukharji, 2016; George, 2013; Shome, 2016). Speaking to this suggestion, "The Science of the Seas" feature has opened the possibility of local Indian practices influencing and advancing Western science. However, rather than presenting the fisherman as worthy of further inquiry, "The Science of the Seas" portrays him as an exotic figure with an ancient and deeply mystical connection to the sea. The feature thus ends up being an example of the stereotypical ways in which Western science typically portrays non-Western knowledge. Although the spirit of a holistic understanding of plural sciences is invoked in the piece, "The Science of the Seas" misses the opportunity for an exchange between cultures that would deserve deeper consideration. This result—whether intentional or otherwise—reflects the feature writer's caste privilege, showing how colonial attitudes in journalism can seep into even non-Western journalistic outlets.

Methodologically, our study provides a cultural-critical interpretation consonant with the call for qualitative approaches using smaller, manually collected data samples for deeper analysis of born-digital media content (Latzko-Toth, Bonneau, & Millette, 2017; Hine, 2015). This method adopts the suggestion proposed by Latzko-Toth et al. (2017) that media communication research can benefit from the "thickness" of "small data" through selective manual collection of content produced. In the spirit of Geertz (1973), our analysis thus aims to thicken the critical significance and contextual sensibility of scientific knowledge as expressed through the richly representative series, "The Science of the Sea" in *The Wire Science*. This interpretive approach is defined by the generation of new insight from established facts, according to "the project of explicating communication" (Lindlof & Taylor, 2019, 310). Our interpretation of the text draws on Maggio (2007) who advocates for a "reading of culture(s) based on the assumption that all actions, to a certain extent, offer a communicative role" (p. 421). Furthermore, our interpretation is executed here as a process

that attributes meaning to discourse originating in one context, which is the text of "The Science of the Seas," which we then translate into the discourse surrounding the broader cultural and ideological context of indigenous knowledges and Western science (Dresner, 2016). Our choice of focusing this study on "The Science of the Seas" was determined in part by the explicit and protracted (June 2021-August 2023) engagement with the indigenous knowledge system of fishing. As a prominent Indian newsmagazine, *The Wire Science* represents an ideal locus of discursive negotiation of the tension between the stereotype of Western "true" science and indigenous, subaltern science.

Communicating Pluralistic Conceptions of Science

Before we take up the case of "The Science of the Seas" for study, it is essential to dissect the term "science" for otherwise our concerns can remain, as Kumar et al. (2018) suggested, "circumscribed by the very Euro/West-centric categories" (p. 24) that our essay seeks to transgress. Much like journalism, science constitutes both a sign as well as a body of ideas and practices (Prakash, 1999). Science as a sign refers to a coherent and homogenous category, undergirded by a common method that entails processes such as experimentation, replication, verification, falsifiability, and generalizability. Science, in this mode, is ubiquitous today: from politicians across the world promoting science for national development and progress to the mass media using the term in news coverage of relevant events. In the second mode, science is an intellectual and philosophical project encompassing a diverse body of ideas and practices (Philip, 1998). It is a *construction* that derives its (il)legitimacy from specific socio-political contexts at a point of time (Gordin, 2012). Sciences including Ayurveda, Unani Tibb, Siddha, and Neidan, among many others, are classified within this second mode (Kumar et al., 2018). Scientists and the like, depending on the place and time, considered them as non-science, pseudo-science, or science.

Within media scholarship, the term science has largely escaped scrutiny understandably because of a preoccupation with objects and technologies that facilitate human communication. Consequently, media and journalism studies scholars tend to treat science as a sign, as more or less a received term, something outside the purview of critical inquiry for the discipline (e.g., Allan, 2009; Colson, 2011). This inherent conception of science as a sign within communication has reproduced the Euro/Western-centric understanding of science along with the hierarchy that science moved from the West to the (predominantly empty) non-West. Journalism studies scholar Silvio Waisbord (2023), for example, writes that the Global South has "historically depended on scientific and information capabilities in the global North" (p. 4). This assertion categorically ignores the fact that not only an exchange of scientific knowledge between the Global North and South took place in the pre-modern and modern era through trade and travel, but also European colonizers for centuries appropriated scientific and medicinal knowledge from "non-Western" sciences such as Ayurveda (Mukharji, 2020; Palit, 2009).

In seeking to resist the prevalent colonial tendency, we adopt in this essay the constructivist stance toward science, a position often employed by scholars in the fields of science studies, environmental humanities, and area studies. To embrace this position is not to erect a boundary or dichotomy between the West and the non-West; instead, it serves as an analytical trope to acknowledge the plural character of science and the possible synergies between different sciences. After all, as Kumar et al. (2018) noted, sciences such as Ayurveda, Unani Tibb, and Ruqyah continue to flourish alongside biomedicine, chemistry, and physics. Conceiving science in this second, constructivist mode also allows us, in this article, to study critically the extent to which the news media become vehicles for communicating science in a pluralistic way.

One vital concern in public (and scholarly) discourse on pluralistic conceptions of science is the potential state or religious appropriation of scientific knowledge, a phenomenon Brown (2012) calls "scientizing of tradition and spiritualizing of science" (p. 228). For example, in postcolonial India, despite its achievements in science, higher caste Hindu nationalists often stake claims on modern scientific discoveries and knowledge as they attribute them to the canonical texts of the *vedas* and *shastras*, a chief but not exclusive source for Ayurveda. Origin narratives are created to establish authority and reshape modern futures. By "inscribing the origins of these sciences in a glorious Hindu past whose decline and fall was ascribed to medieval Muslim rule, Hindu elites incorporated the sciences in their projects of political and social power" (Singh, 2022, p. 237). The sciences are used, among other things, to support the majoritarian nationalist project in which Muslims and lower caste populations have limited place.

Following Arnold (2013), we therefore suggest that a multivalent approach to science adds analytical depth insofar as it allows scholars to situate themselves outside both the nationalist narratives of science and the colonial vision of science. The latter represents science in the non-West as a form of "stubborn localism" (p. 361), as a kind of ethnographic aside to the real (Western) science. The colonial vision denies contemporaneity to the non-West and treats their sciences and cultures as the past that the West has already lived out (Thomas, 2021; Visvanathan, 1997). On the other hand, the nationalist representations of science are built in a majoritarian vein that excludes minorities and marginalized groups (Nanda, 2004). The nationalist project in India, for instance, provides patronage to a subset of Asian or Indic sciences including Ayurveda, Unani, and Siddha.[3] This niche has evolved into a powerful government department, the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), which has access to substantial funding (Mukharji, 2018).

Towards a Conception of Subaltern Science

Situated outside the peripheries of the nationalist and colonial visions of science is "subaltern science." The term subaltern is a placeholder for subordinate or marginalized, following its use by Antonio Gramsci (2011) in *Prison Notebooks*. Historian Ranajit Guha (1982) embraced this term and conceptualized it as the "demographic difference between the total Indian population and all…elite" (p. 8). His conceptualization provided the foundation for the emergence of the Subaltern Studies Collective in South Asian historiography, from which this essay draws some of its theoretical inspiration. Over the decades, the Subaltern Studies Collective produced a vast body of critical scholarship on the Global South. In her influential essay "Can the Subaltern Speak?" Gayatri Spivak (2003) advanced that the subaltern is always represented by others who speak on her behalf, indicating that subalternity is interlaced with "a certain degree of voicelessness" (Ramapurath Chemmencheri, 2015, p. 3).

In bringing together the terms "subaltern" and "science," our intention in part is to highlight this "voicelessness," the embedded power differences that historically and contemporarily render this form of knowledge in the margins of inquiry and which we hope to foreground. "Subaltern science" thus refers to a range of sciences that derives its essence from the knowledge of the marginalized. These include a variety of practically taught and often orally transmitted techniques and modalities that have been sidelined, sometimes even persecuted, by the state. Subaltern science resides in the realm of the "vernacular." It draws on the generational wisdom of communities such as Muslim traveler-scholars who journey "in search of knowledge" (*fi talab al-'ilm*) or fishers whose occupation is considered polluting in Sanskritic Hinduism because it involves the destruction of life, handling of organic matter and is associated with the "polluted practice of non-vegetarianism" (Alex, 2020; Mukharji, 2018). Our conflation of the terms subaltern and science is not indicative of

the position that every member of these communities is invested in these sciences. Crossovers happen and community members engage with more mainstream professions and sciences. Likewise, subaltern science is dynamic and continues to evolve and mutate as it co-exists with different sciences including "Indic" and "Western" sciences. Despite these developments, subaltern science maintains its characteristic mode of knowledge production. With this analytical frame and concept in mind, we now offer a critical account of the news media construction of subaltern science in *The Wire Science*.

Charting and Critiquing *The Wire Science*'s Construction of Subaltern Science

The Wire Science, for the most part, leaves it to the audience to interpret the term "science."[4] There are no "about us" or "mission" statements available on the website. Science—as a sign—is assumed to be something that is already familiar. And if not, it is certainly identifiable through the self-explanatory labels on the homepage: "health," "environment," "aerospace," and "education." Science-related news stories are assigned to these labels. Some articles are also republished from international outlets such as *The Conversation* and *Undark*. The "submission guidelines" stated on the webpage ensures that each unsolicited article in *The Wire Science* is standardized before publishing. The conventional journalistic structure of most news stories tends to obfuscate, if not completely hide, the underlying meanings and positions of the authors and, by extension, of the news media outlet. Therefore, we focus on the genre of the multimedia feature story, which allows for subjectivity and intimacy on the part of the author, providing a window into the intricacies of subaltern science journalism.

At the time of writing, a multimedia feature story titled "The Science of the Seas" on the homepage offers the promise of a "different way of engaging with the natural universe, communicated in the language of the fishers," as stated in the tagline. This emphasis on

difference in the tagline and the first passage of the story presents a caveat to the socially liberal audience of *The Wire Science.* As opposed to the formulaic news stories on the website, "The Science of the Seas" aims to present the perspectives of a fisherman through a series of diary entries. The entries, in fact, document informal conversations in the Tamil language between a fisherman and a male "citizen science enthusiast" about the knowledge systems of the seas. "The Science of the Seas" is an ongoing project currently comprising 24 dispatches. Each entry typically contains multimedia elements such as photographs, videos, or audio clips that complement the story. Given the acute lack of coverage of subaltern science in the English-language news media in general, "The Science of the Seas" constitutes an innovative move. An editorial note introduces "The Science of the Seas" series, as if to justify and clarify the inclusion of this unconventional multimedia story to the audience:

> Marine biologists may be experts on the living beings of the sea; ocean hydrographers may be adept at mapping ocean currents and upwellings; meteorologists study atmospheric phenomena to make sense of the weather. Not one of these experts needs to be able to venture out to sea, know enough of fish, their habits and habitat, read the weather and ocean conditions with sufficient accuracy to decide on whether a fishing trip would be worth it in terms of physical and financial risk, and return home with fish in their boats and life and limb intact. Artisanal fishers do this every day.

In the otherwise crude empiricist landscape of mainstream sciences, the description marks and creates a practical space for a fisher. The introduction projects the knowledge gap as it further explains that "Mainstream education has valourised only one form of knowing – namely, the ways of institutional western science that have dominated knowledge discourses since the industrial revolution. Traditional sciences, if at all considered, are viewed patronisingly." It is worthwhile to pause and reflect on the term "traditional." While the

editorial note consciously foregrounds the hierarchy of knowledges, the designation "traditional" seems to suggest that the fisher's way of knowing lacks contemporaneity and hence belongs to a tradition. The idea of the contemporary inherently involves a "gesture of exclusion" (Chakrabarty, 2009, p. 87). As Kumar et al (2018) note, anything not perceived as contemporary is excluded from the "ever progressive futurism" (p. 27) of modernity and science. Ironically, then, the use of the term "traditional" ends up reinforcing the very hierarchy that the editorial introduction sets out to critique.

The word "traditional" features again later in the introductory note: "Agencies as lofty as the United Nations-supported Intergovernmental Science Platform on Biodiversity and Ecosystems Services have emphasised in no uncertain terms that humanity's emergence from the natural crises that is imminent is not possible without inspiration from the traditional systems of knowledge." Adjectives such as "traditional" and "lofty" serve as temporal and spatial metaphors for projecting a hierarchy that, in itself, becomes a *raison d'être* for the fisher's story. Spivak (1987) observes that "a basic technique of representing the subaltern as such (of either sex) is as the object of the gaze 'from above'" (p. 129). In this case, a distinctive story concerning a fisher's experiences thus warrants representation when it has an endorsement from a "lofty" organization.

Arguably, too, the inclusion of the fisher's story in *The Wire Science* would not have been possible without the availability of an intermediary considering caste-class hierarchies. "The Science of the Seas," we are informed, stems from conversations between a "subaltern" fisher and a "writer, social activist and citizen science enthusiast" who serves as a mediator. The mediator's caste is not revealed in the story (elsewhere, on another news platform, he discloses his caste as Brahmin [highest caste]). The mediator or feature profile reporter is the diary-keeper, jotting down in English and Tamil the conversation with brotherly affection:

> As we neared Adyar estuary, Palayam brought me out of my reverie. “Anna, you are lost in thought. Look around and tell me, where’s the wind blowing from.” With some doubt, as I didn’t want to disappoint the teacher, I replied with a question: “Vaadaya adikkuthunna. Correctaa?” (‘It’s blowing from the north brother, correct?’) My doubt was not without basis. The receding of the northeast monsoon around February is accompanied by a change of current and winds. Where the current and winds flow/blow from the north during Chennai’s dominant monsoon, around February, the current switches and begins flowing from the south. This much I had been taught, shown and was expected to know.

At the time of the exchange between the fisher and the writer, the corresponding identities are bracketed; the former assumes the role of an informal teacher, communicating to the student (writer) his knowledge of sea and wind. And once the conversation concludes, their social roles are restored again. In the end, the conversational record remains at the hands of the writer who infuses it with his own thoughts and feelings, providing an authoritative stamp to the fisher’s words as the notes are neatly woven into an entry. Although each entry includes the tagline “Teachings, Learnings and Conversations: S. Palayam to Nityanand Jayaraman,” it is the writer (Nityanand Jayaraman) whose written words are dominant in every entry. The writer thus serves as the necessary bridge between the lower caste fisher and the (predominantly higher caste) audience. The fisher fades from the story, though not totally, because of his translated words in the form of quotes as well as through his untranslated words via the embedded videos and audios. Despite this, the text is the ultimate authority in “translating” the fisher for a wide and elite audience. The fisher is a teacher at a remove in the story. The reporter and the editor take center stage and the latter credits the fisher’s subalternity in the introductory note: “…Palayam’s expertise is subaltern, and an essential

qualification for any fisher that ventures out to sea and returns home safely – with or without fish."

If subalternity is an "essential qualification" for a fisher, high caste status becomes the normative marker for science journalists and scientists themselves (Thomas, 2020). The lack of a subaltern authorial voice in science journalism is thus naturalized. Indeed, the critique can be extended to scholarly writings, more broadly. The typical figure of the subaltern in society is so marginalized that to have a subaltern speak is akin to "talking of Godot arriving in a bus" (Kumar, 2005, p. 278). Yet, as the case of "The Science of the Seas" demonstrate, subalterns can be occasionally granted subjectivities, partial though it may be. It is, then, important to deconstruct the ways in which the boundaries of science are practically determined and policed (Kumar et al., 2018).

"The Science of the Seas" engages in boundary-making at the outset. Although the meaning of "science" is not spelled out in *The Wire Science* as such, "The Science of the Seas" specifically provides a definition of the term at the beginning of the story: "the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment." This description is malleable enough to align with the fisher's experiences. But it is also implicitly used later in the story to convey a dualism between science and religion, which in turn accords the authorial responsibility to the writer rather than the fisher. One of the entries, for example, specifies that the writer is an atheist and the fisher a believer. "In the world of a fisher, there is no telling where science ends and faith takes over…Palayam anna – ever critical but respectful of my lack of faith – challenged me to find a sea-going fisherman who was an atheist." The writer is inclined to think of "science" and "faith" as mutually exclusive, when for the fisher they are always present together. The competing tensions between the two—that is, the writer and the fisher as well as science and faith—are harmoniously

resolved through embracing "soft multiculturalism" (Kumar et al, 2018, p. 24), as the writer assumes the eventual task of communicating the story.

The story narrative thus seeks to present only a subtle difference between the two interlocutors. It depicts the fisher as a "recognizable Other, as a subject of difference that is almost the same but not quite" (Bhabha, 1994, p. 86). A deeper reading of the text, though, points to more "radical" forms of difference. One example being the omittance of the writer's caste Hindu status in the story. Baudrillard and Guillaume (2008) suggest that "radical" difference or alterity is unrepresentable. Its presence is latent and can only be inferred from traces (Mukharji, 2016). The fact that the Brahmin writer can allow his caste identity to remain unrecognized, even as he becomes the prime mover of the written story, more broadly indicates the centrality of caste privilege in the inner workings of English-language news media in India (Deshpande, 2013; Rao, 2018).

The writer's framing of the fisher's words as tentative, "unpredictable," and overly dependent on religion inadvertently speaks to varying shades of difference between the two. In one entry, the writer notes: "My attempts to secure certainty or a guarantee for the prediction have never succeeded beyond eliciting the usual 'Athellaan ellaiamman kaiyla thaan irukku,' the Tamil equivalent of 'Inshallah' or 'Whatever the goddess wills.'" In addition, stereotypical portrayal of the fisher as humble and ignorant, while seemingly appealing to the audience, undermines the credibility of subaltern science. As a result, it ends up validating the supremacy of "institutional western science."

> Unlike the hubris of institutionally educated minds, the fisher's knowledge map is rooted in humility, an admission of ignorance and a constant and vocalised awe of the elements. "How can we say this is how the ocean will behave? It is impossible for ordinary humans to fathom why the ocean does

what it does. I may learn a thing or two, but I will never learn the whole story."

The last sentence of the passage above also speaks to a localism embedded in the descriptions of the fisher in "The Science of the Seas." The fisher's science is derived from oral histories and observations of the hyperlocal, the south Chennai fishing village of Urur Kuppam, and therefore lacks a panoptic and universal quality unlike "western science." This localism is shown to be built into the fisher's identity, too. While in the story the reporter is presented as someone who travels internationally, the fisher is shown to remain near and preoccupied with the sea. One of the entries includes a photograph in which the reporter gifts the fisher a Tamil translation of the American novelist Ernest Hemingway's book, *The Old Man and the Sea*. Upon receipt, the fisher asks casually: "Does the writer mention the fact that the kola [marlin fish] never flees west?" Local is thus satirized or exoticized but seldom historicized. In "The Science of the Seas," there is little mention of the fisher's family or his family history, nor is there a substantive account of the social spaces and forms of interactions through which the knowledge is orally transmitted over generations. The figure of the local, Mukharji (2018) argues, holds subaltern sciences hostage. They are almost always seen to be relatively unchanging and deeply rooted in a small local milieu.

Although performed in the general interest and likely in the spirit of inclusion, the storytelling limits agency to the fisher and reifies the embedded inequality between the fisher's way of knowing and the more formal, institutionally produced knowledge. It subverts the "alternative" scientific rationality that the story sets out to communicate and falls short of challenging the status quo.

Possibilities and Limits of Subaltern Science Representation

To paraphrase Maggio (2007), speaking on behalf of the subaltern rarely retrieves a subaltern voice for "the act of empowering itself has a silencing effect" (p. 427). This is as much true for scholarly writings as it is for journalistic work. Our reading of "The Science of the Seas" feature in *The Wire Science* shows that, while the idea of representing subaltern fisher science in English-language news media is novel, caste-class hierarchies are inscribed into the story narrative in such a way that it prevents subaltern science from fully emerging, thereby reinforcing the primacy of mainstream science. These hierarchies are embedded in the subtext through multiple means: from the Brahmin mediator's absence of reflection on his positionality to the stereotypical portrayal of the subaltern fisher as innocent. The script is not new. Shailaja Paik (2014) and Charu Gupta's (2015) analyses of historical records and literature, for instance, demonstrate that European missionaries in colonial India "repeatedly talked of the innocence of the outcastes" (p. 109). The persistence of such frames is indicative more broadly of the challenges of journalism practice in a developing country where the caste question remains unresolved and continues to be underplayed by the postcolonial state and society. Given that most Indian scientists continue to be drawn from higher caste backgrounds, their work on Western science more directly influences the worldviews of English-language science journalists, who themselves tend to be predominantly higher castes, in turn reinforcing the mainstream perspective (Khan and Haneef, 2022; Thomas, 2020).

Despite these shortcomings we identify two crucial agendas that "The Science of the Seas" project pursues, all of which necessitate further examination. First, it makes space for multilingual registers of science journalism for a multilingual audience. The audio and video elements in the feature are in the Tamil language and the posts are mostly in English with a sprinkling of Tamil. The embrace of bilingualism not only preserves some of the essence of the actual conversation between the writer and the fisher, but it also seemingly caters to the

tastes of an audience accustomed to the realities of multilingualism in postcolonial India. This type of linguistic encounter or "cross-pollination" (Rajagopal, 2015, p. 26) in which the vocabularies and cultural styles of a classic Indian language (Tamil) infuses the former colonial language (English) and vice versa can help produce multiple ways to communicate science to a postcolonial news audience.

Second, "The Science of the Seas" project hints at the potential of dialectical relationship between mainstream and subaltern sciences to generate large-scale data to assist fishers. The writer who is trained in mainstream sciences and engineering notes in an entry: "…as part of our Science of The Seas project, Palayam and I have been maintaining a daily record of wind, nearshore and mid-sea currents and qualitative notes about weather and ocean conditions based on his observations from the beach," adding that, "Our attempt to generate nuanced data to back fishers' general observations about changing seas is perhaps the first one to use a human meteorological observatory – Palayam – to record hyper-local data capable of yielding hyper-local findings." The development of such sustainable measures through harnessing community knowledge as well as their effective dissemination can be fruitful against the backdrop of climate change-induced vagaries of the seas and the environment.

Returning to our notion of "subaltern science," this essay demonstrates the usefulness of bringing together the terms "subaltern" and "science" for inquiry in mediated contexts. As Yengde (2019) points out, subalternity or caste is often understood through the prisms of heinous violence and poverty and therefore its role in the everyday realm of public and private life remains largely undiscussed. Speaking to this gap, our essay fleshes out the enactment of caste within the everyday practices of science and journalism. In doing so, we also highlight the tensions and contradictions in tracing the contours of science in scholarly and journalistic domains. Few will doubt that *The Wire* is one of the most progressive news

media outlets in India today, and as *The Wire Science*'s "The Science of the Seas" is an unfinished, ongoing project, any criticism risks being labelled as premature and hyperbolic. But we contend that it is by putting this raw formation under critical spotlight that we begin to get a clearer view of a contingent phenomenon like caste and glean timely lessons to improve subaltern science journalism.

Notes

[1] We work from the understanding that the terms "Western" and "non-Western" are non-homogenous labels, which constitute both geo-political spaces as well as pervasive imaginaries (Chakrabarty, 2009; Harindranath & Gomez-Cruz, 2023).
[2] These observations are based upon our ongoing, larger project on English-language science journalism in India.
[3] Unani Tibb, as Seema Alavi (2005) notes, is originally a Greek system of medicine, which "Muslims appropriated during the period of their early expansions into the Greco-Roman world" (p. 102).
[4] As we show later in this essay, a definition of "science" appears in the introduction to the "The Science of the Seas" feature.

References

Allan, S (2009) The future of science journalism. *Journalism: Theory, Practice & Criticism*, 10(3), pp.280-282.

Alavi, S (2005) Unani medicine in the nineteenth-century public sphere: Urdu texts and the Oudh Akhbar. *The Indian Economic & Social History Review*, 42(1), 101-129.

Alex, DR (2020) From untouchables to Vyasa's clan: Fishermen's reform movement in Kerala. *South Asia: Journal of South Asian Studies*, 43(2), 199-214.

Ambade, P (2021). Ayurveda: claims, facts, and reality. *Round Table India*. Retrieved from https://www.roundtableindia.co.in/ayurveda-flaunts-facts-and-reality/

Arnold, D (2013) Nehruvian science and postcolonial India. *Isis*, 104(2), 360-370.

Baudrillard J and Guillaume M (2008) *Radical Alterity*. Los Angeles: Semiotexte/Smart Art.

Bhabha, H (1994) *The Location of Culture*. London: Routledge.

Brown, CM (2012) *Hindu perspectives on evolution: Darwin, dharma, and design*. Routledge.

Colson, V (2011) Science blogs as competing channels for the dissemination of science news. *Journalism: Theory, Practice & Criticism*, 12(7), pp.889-902.

Chakrabarty, D (2009) *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton, N.J.: Princeton University Press.

Deshpande, S (2013) Caste and castelessness: Towards a biography of the "general category". *Economic and Political Weekly*, 48(39), 32–39.

George, C (2013) Diversity around a democratic core: The universal and the particular in journalism. *Journalism: Theory, Practice & Criticism*, 14(4), 490-503.

Gordin, MD (2012) *The pseudoscience wars: Immanuel Velikovsky and the birth of the modern fringe.* University of Chicago Press.

Gramsci, A (2011) *Prison Notebooks*, Volumes 1-3.

Guha, R (1982) *Subaltern Studies I: Writings on South Asian History and Society*. New Delhi: Oxford University Press.

Gupta, C (2015) Embodying Resistance: Representing Dalits in Colonial India, *South Asia: Journal of South Asian Studies*, 38(1), 100-118.

Hardiman, D (2009) Indian medical indigeneity: from nationalist assertion to the global market, *Social History*, 34(3), 263-283.

Harindranath, R & Gómez-Cruz, E (2023) Beyond concepts as tokens: heuristic value and epistemic politics in the study of digital subalterns. *Communication, Culture & Critique*, 16(4), 228-234.

Jayaraman, N (2015) Caste, Class and the 'Classical' – FAQs about the Urur Olcott Festival. *Kafila*. Retrieved from https://kafila.online/2015/01/11/caste-class-and-the-classical-faqs-about-the-urur-olcott-festival-chennai-nityanand-jayaraman/

Khan, AA & Haneef, MSM (2022) Counted out or taken in: mapping out diversity of journalists in three Indian digital native English newsrooms. *Critical Studies in Media Communication*, 39(2), 127-140.

Kumar, A (2005) Theory by Other Means. *Rethinking Marxism*, 17(2), 275-279.

Kumar, P, Mukharji, PB, & Prasad, A (2018) Decolonizing science in Asia. *Verge: Studies in Global Asias*, 4(1), 24-43.

Lock, S, Last, JM, & Dunea, G (2001) *The Oxford illustrated companion to medicine*. Oxford: Oxford University Press.

Maggio, J (2007) “Can the subaltern be heard?”: Political theory, translation, representation, and Gayatri Chakravorty Spivak. *Alternatives*, 32(4), 419-443.

Mukharji, PB (2016) *Doctoring traditions: Ayurveda, small technologies, and braided sciences*. Chicago, IL: University of Chicago Press.

Mukharji, PB (2018) Dis-locating Subaltern Therapeutics: Totka Chikitsha, Nomad Sociality, and Anti-consumerism in Colonial Bengal. *Asian Medicine*, 13(1-2), 134-169.

Mukharji, PB (2020) Historicizing “Indian Systems of Knowledge” Ayurveda, Exotic Foods, and Contemporary Antihistorical Holisms. *Osiris*, 35(1), 228-248.

Nanda, M (2004) *Prophets Facing Backward: Postmodernism, Science, and Hindu Nationalism*. New Delhi: Permanent Black.

Paik, S (2014) Building Bridges: Articulating Dalit and African American Women's Solidarity. *Women's Studies Quarterly*, 42(3/4), 74-96.

Palit, C (2009) Ayurveda in Colonial Bengal: Survival and Revival. *An Ancient Indian System of Rasayana: Suvarnatantra a Treatise on Alchemy*, 147.

Philip, K (1998) English Mud: Towards a Critical Cultural Studies of Colonial Science. *Cultural Studies*, 12(3), 300-331.

Prakash, G (1999) *Another reason: Science and the imagination of modern India*. Princeton University Press.

Rajagopal, A (2015) Non-Western Television: Coeval Temporalities of Nation and Television. In *The Sage Handbook of Television Studies*. (Eds.) Manuel Alvarado, Milly Buonanno, Herman Gray & Toby Miller. Thousand Oaks, CA: Sage Publications.

Ramapurath Chemmencheri, S (2015) Subaltern struggles and the global media in Koodankulam and Kashmir. *South Asia: Journal of South Asian Studies*, 38(2), 187-199.

Rao, P (2018) The five-point Indian: Caste, masculinity, and English language in the paratexts of Chetan Bhagat. *Journal of Communication Inquiry*, 42(1), 91-113.

Shome, R (2016) When postcolonial studies meets media studies. *Critical Studies in Media Communication*, 33(3), 245-263.

Singh, C (2022) The shastri and the air-pump: Experimental fictions and fictions of experiment for Hindi readers in colonial north India. *History of Science*, 60(2), 232-254.

Spivak, GC (2003) Can the subaltern speak? *Social Theory: The Multicultural and Classic Readings*. Charles Lemert (Ed.) pp. 609-614. Oxford: Westview Press.

Spivak, GC (1987) "A Literary Representation of the Subaltern: Mahasweta Devi's 'Stanadayini,'" In Ranajit Guha (Ed.), *Subaltern Studies V: Writings on South Asian History and Society*. Delhi: Oxford University Press.

The Wire Science (2023) The Science of the Seas. Retrieved from https://science.thewire.in/science-of-the-seas/

Thomas, R (2020) Brahmins as scientists and science as Brahmins' calling: Caste in an Indian scientific research institute. *Public Understanding of Science*, 29(3), 306-318.

Thomas, R (2021) *Science and religion in India: beyond disenchantment*. Routledge.

Visvanathan, S (1997) *A carnival for science: Essays on science, technology, and development*. New Delhi: Oxford University Press.

Waisbord, S (2023) Intertwining Science Journalism with (Post) Development. *Journalism Studies*, 1-8.

Yengde, S (2019) *Caste Matters.* Gurgaon, India: Penguin Random House India Pvt. Ltd.