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Imposing innovation: How 'innovation speak' maintains postcolonial exclusion in Peru☆

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A B S T R A C T

Innovation is regarded as a central driver of societal progress via its perceived role in enhancing economic growth and competitive advantage. As a result, ideals associated with innovation have long influenced development theory, policy and practice, particularly in relation to how nation-states, industries and communities might overcome structural barriers to poverty, unemployment, and more. In recent decades, development discourse has come to embrace a more individualised perspective that views business models, design-thinking and entrepreneurship as key engines of economic creativity and growth. This trend, known as *innovation speak*, is today a globally dominant paradigm influencing nearly every aspect of economic and social policy, from education to healthcare. In this paper, we argue that innovation speak reinforces colonial power relations, particularly the socioeconomic exclusion and cultural subordination of racialised communities. Focusing on Peru as an empirical setting, our study employs semi-structured interviews with key informants, analyses policy instruments, and draws insights from research diaries documenting a visit to an Indigenous-led innovation initiative. Through our analysis, we illuminate how innovation speak permeates development discourse, policy and tools, with the effect of reinforcing a globally dominant capitalist imaginary that posits market- and growth-centric forms of innovation as the presumed path to national development, to the exclusion of other approaches practised and prioritised by Indigenous groups. Our study thus contributes to a more nuanced understanding of innovation speak, coloniality, and the discourses that today dominate development policy and practice in many Global South nations.

1. Introduction

Technological development and change have long been considered cornerstones of societal advancement, driving productivity, economic growth and societal welfare (Bartels et al., 2012). Today, technological development is increasingly conflated with ideals associated with *innovation*, the process of developing products and services to both meet market demands and create new market opportunities (Godin, 2020; Godin & Vinck, 2017). This association is so deeply entrenched, it is difficult to speak about economic growth without referring to innovation (Pansera & Fressoli, 2021). In short, innovation has become all-encompassing and inevitable when thinking about the future, science, society, education, development, the economy, and so on (Krause, 2013). The rise of innovation as a dominant discourse for socioeconomic progress influences economic and social policy, has been embraced by key societal institutions including education, finance and healthcare, and is widely supported by politicians, policymakers, donors, philanthropists, journalists and academics (Perren & Sapsed, 2013). This 'innovation turn' has also greatly influenced development policy and practice, with donors, experts and practitioners increasingly promoting the idea that structural problems such as poverty and unemployment can be addressed through sustainable business and entrepreneurship development (Pansera & Owen, 2018; Muñoz & Cohen, 2018).

Viewed from this perspective, innovation can be seen as a dominant global discourse and criterion in development policy and practice by providing the answer to the question of how best to solve the world's most pressing problems (Canfield, 2023). Vinsel & Russell (2020) describe this as *innovation speak*, the language frequently used to hype certain technologies, tools, instruments and practices as well as their imagined future impact. Innovation speak is frequently framed around the normative premise that innovation is inherently good, with the potential to solve any development challenge, from health to food insecurity to climate change to poverty (Vinsel & Russell, 2020). And while the problems it addresses are vast and diverse, their 'solutions' almost always manifest as market-based, profit-making ideas (Robra et al., 2023). Innovation speak and the 'solutions' it promotes are ubiquitous; they present in national policies and development programming; in the frameworks and language used by policymakers and practitioners; in social interventions and practices beneficiaries are meant to engage; and in how both success and failure at organisational, industry and national

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levels are understood (e.g. failure as the failure to innovate) (Godin, 2015). Innovation speak also permeates curricula in business, management, public policy and social policy schools globally (Brandl & Bullinger, 2009).

In this way, innovation speak can be understood as a powerful force aligning the interests of national elites and public and private sector actors along a narrow set of economic aspirations, priorities and norms (Irani, 2019). However, for those who hold alternative ideas of economic and societal progress, innovation speak represents a hegemonic discourse of progress. Though we recognise that notions of innovation rooted economic growth and industrial production have long been contested and debated (Godin, 2015), innovation speak unquestionably remains a powerful force advancing and sometimes imposing Western norms and agendas of science and technology globally, including what it means to be a modern productive (i.e. innovative, entrepreneurial) actor (Meyer & Jepperson, 2000).

Using Peru as an empirical case study, we document and analyse how innovation speak operates in practice, by constraining and shaping the agency of local actors. By examining its pervasive influence on innovation discourse, policies, tools, and initiatives, we explore how innovation speak is instrumental in reinforcing the national social order to the benefit of national elites and exclusion of racialised, Indigenous communities. We do this through an analysis of semi-structured interviews with key informants, national policy instruments, and research diaries from a visit to an Indigenous-led innovation initiative. In short, our study reveals how innovation speak acts as a hegemonising discourse that reinforces a postcolonial order through the imposition of a capitalist, market-based approach to development which marginalises and instrumentalises Indigenous aspirations, ingenuity and knowledge.

Our paper contributes to development studies in three ways. First, we advance a conceptualisation of innovation speak as a contemporary global innovation discourse emerging from longstanding notions of economic and societal progress through technological development and change. Second, we articulate how global discourses of innovation relate to *coloniality of power*, which refers to colonial and postcolonial structures, discourses and actions that both maintain and entrench racialised relations which are instrumental to systems of exploitation and marginalisation, such as capitalist exploitation and extraction (Quijano, 2000; 2007). Third, through our empirical case study of innovation in Peru, we explore how innovation speak reinforces neocolonial structures by imposing manifestations of innovation discourse which exclude Indigenous peoples and knowledge while simultaneously instrumentalising Indigenous culture.

2. Innovation discourse in the context of development

Scholars across a variety of disciplines have long emphasised the relationship between 'modern science' and processes of colonisation, often arguing that one does not exist without the other (Adas, 1989; Goonatilake, 1984; Headrick, 1981). The use of science and technology to assert racial difference—depicting colonised, subjugated peoples as barbaric and less capable—was employed to justify European colonial and imperial expansion, reinforcing perceptions of technological superiority while relegating non-Western and especially Indigenous knowledge (Adas, 1989; Frieman 2021), even erasing their contributions to Western thought (i.e. Islamic sciences) (Frieman & May, 2020; Harding, 2011). This perceived incapacity of colonised, subjugated peoples to innovate and increase their economic productivity came to inform dominant economic theories of development (Escobar, 2012; Adas, 1989). The idea of development itself is thus historically rooted in the demarcation between those who are and are not seen as capable of economic creativity, dynamism and novelty, or, stated alternatively, as having the ability to innovate. This became even more dominant with a revival of Schumpeterian ideas and the 1980s neoliberal turn (Pansera & Owen, 2018), where managerial discourses of innovation became incorporated into development policy, resulting in a significant body of literature that views innovation as essential for development (Pansera & Martinez, 2017).

We build a conceptual bridge between these foundational ideas of innovation with contemporary articulations of innovation speak through three dominant Western-global perspectives on innovation which, in our view, underpin the rise of innovation speak as development discourse, policy and practice. These are innovation as a driver of economic growth, ecosystem thinking, and sustainable development. Taken together, these perspectives led to the emergence and framing of innovation speak as having the potential to solve almost any development challenge through market-centric technologies and business models (Robra et al., 2023). We then present important challenges and alternatives to these perspectives with a focus on Latin American and Indigenous scholars and movements, given the empirical setting of our study.

2.1. Innovation as a driver of economic growth

Innovation became a compelling policy concept after WWII owing to its coupling of ideas of progress, human development and economic growth (Pansera & Owen, 2018; Pansera & Fressoli, 2021). As a result, innovation was elevated as the key driver of national wealth and competitiveness as well as industry and firm-level performance and profitability (Fagerberg & Srholec, 2008; Srinivas & Sutz, 2008). The relationship between innovation and economic growth within Western concepts of development has two dominant strands: a neoclassical theory of growth, and a neo-Schumpeterian evolutionary strand. In the first, technological progress is thought to follow a similar path in all countries and regions (Howells, 2005). This approach regarded innovation as the commercialisation of scientific discoveries motivated by an economic logic of investment and financial returns (Schot & Steinmueller, 2018). Moreover, technology was considered a public good that would eventually be available everywhere as a result of the process of 'convergence' between high and low-income countries (Fagerberg et al., 2010; Howells, 2005).

The second strand is distinguished by neo-Schumpeterian evolutionary views on economic growth. According to this viewpoint, not all countries or regions benefit from innovation equally (Howells, 2005). Instead, countries that innovate would experience higher economic growth than those which adopted imitation strategies, resulting in varying growth rates and economic disparity across countries and regions (Verspagen, 1992). From this perspective, less industrialised countries were thought to be able to adopt new technologies and business models without incurring costs associated with their development (Abramovitz & David, 1994; Fagerberg et al., 2010). To make this work, scholars and policymakers alike argued that lower-income countries needed to develop institutional instruments or capabilities for overcoming the barriers that impeded technology adoption and adaptation (Gerschenkron, 1962). This normalised the view of developed, industrialised nations as innovative and lower-income countries as recipients of foreign technologies and innovations. The ability of lower-income countries to adapt foreign innovations thus became seen as a requirement for economic growth and, consequently, development (Schoemaker et al., 2018; Teece et al., 2016).

2.2. Innovation as ecosystem thinking

Another dominant framing is rooted in the recognition that the interplay among constellations of key actors, namely governments, academic institutions, industry, and entrepreneurs, is paramount for enhancing innovation (Lundvall et al., 2009). This approach gained recognition following the realisation that scientific and technological knowledge was not being shared as a public good as initially expected (Schot & Steinmuller, 2018). Insights were derived from countries that became competitive based on unique configurations of organisations which enabled them to successfully participate in both national and

global marketplaces (Freeman, 1995). This also emphasised the important role of the government and policy in stimulating economic growth through the competitive advantage of domestic firms (Schot & Steinmueller, 2018).

The ecosystem thinking framing acknowledges the intricate, multifaceted, dynamic, and uncertain nature of innovation, not as a prescriptive set of steps but as a holistic and sometimes serendipitous process (Godin, 2006). Examples include the National Innovation Systems and Triple, Quadruple and Quintuple Helix models of innovation (Cai & Amaral, 2022; Pansera & Fressoli, 2021), which are routinely promoted as frameworks for enhancing innovation in the Global South (Lundvall et al., 2009). Much of the literature in this space focuses on how to improve national conditions in the Global South so as to harness and cultivate local innovation ecosystems, hubs or networks (Wheeler et al., 2005) or replicate those that exist elsewhere (Perry, 2020).

Consequently, when applied to Global South countries, these models and frameworks of innovation often underscore challenges to innovation via replication (Arocena & Sutz, 2003). Rather than questioning the imperative for these countries to bridge the gap, or taking into account possible environmental, social or even cultural consequences, the literature primarily concentrates on determining the most effective strategies for their catch-up efforts, which include relying on foreign patents and global standards that often serve to reinforce material and symbolic North-South dependencies (Lee et al., 2021).

2.3. Innovation as sustainable development

From the 1990s, innovation discourse started to become increasingly framed as a shortcut for advancing a host of sustainable development priorities, from poverty alleviation to addressing climate change (Pansera & Owen, 2018). This has resulted in a variety of trends, such as 'frugal innovation' (Agarwal & Brem, 2012), 'reverse innovation' (Govindarajan & Trimble, 2012), 'jugaad innovation' (Radjou et al., 2012), 'bottom-of-the-pyramid' (Prahalad, 2012), 'pro-poor' innovation (Luiz et al., 2021), among others. What connects these approaches to innovation is the reframing of material, financial, and human scarcity as a driver of creativity (Gibbert et al., 2007) coupled with the emancipatory promise of technology, business models and markets (Abdelnour et al., 2015; Muñoz & Cohen, 2018). Perhaps not surprisingly, much of the academic and practitioner literature on innovation as sustainable development has been primarily focused on the Global South. While some of this work is viewed from a grassroots perspective, other streams originate with multinational corporate interests that seek to commodify innovation for the benefit of global value chains and for exploiting 'untapped' markets (Kaplinsky, 2000; Prahalad, 2012).

The framing of innovation as an instrument for sustainable development is closely linked with problematisations that reframe complex structural problems (i.e. poverty) and even global grand challenges (i.e. climate crisis) as resolvable if only households and individuals were to embrace new technologies and business models (Abdelnour & Pemberton-Pigott, 2018). As more critical scholars have noted, such approaches to innovation risk shifting responsibility for addressing structural societal and environmental problems onto those who experience and endure them but have little to do with their causation (Abdelnour & Saeed, 2014; Pansera & Owen, 2018). They also serve to 'technologise' sustainable development issues by focusing the concerns, questions and interventions considered by policymakers towards technology, entrepreneurial and market-based interventions (Abdelnour et al., 2020; Abdelnour & Saeed, 2014). One example is clean cookstove technologies, which have long been promoted as a solution capable of reducing problems associated with collecting and burning wood for cooking, such as deforestation and the negative health consequences of cooking, but more recently have been reconceived as a solution to problems not caused by poor people cooking, such as sexual violence and the global climate crisis (Abdelnour et al., 2015). The development of an international standard for the testing and rating of clean cookstoves was in part enabled to enhance global markets and adoption of clean cookstove technologies and facilitate their certification as a carbon-offsetting technology (Abdelnour & Pemberton-Pigott, 2018; Gill-Wiehl et al., 2024). To summarise, innovation from a sustainable development perspective implicitly reduces the structural features of underdevelopment, such as poverty, to problems of a lack of innovation capabilities, rather than as a consequence of longstanding structural socioeconomic inequalities, including colonialism (Harding, 2011; Rodney, 1972).

2.4. Challenges and alternatives to the dominant innovation discourse

Although prevalent in the policies and interventions promoted by most global and national institutions, the ideals underpinning dominant approaches to innovation and its more recent innovation speak articulations have not gone unchallenged. In the 1970s Latin American dependency theorists argued that underdevelopment in the Global South is a result of economic dependence on industrialised nations of the Global North (Sagasti, 1973). It is widely understood that technology played a crucial role in this dynamic, as advanced technologies were utilised to control innovation and accrue productivity gains. Underdeveloped nations reliant on imported technology faced unfavourable terms of trade and struggled to industrialise or develop independently (Herrera, 1981; Jaguaribe, 1979; Sábato & Botana, 1970; Sagasti, 1973). Technological dependencies thus deepened economic imbalances, as profits from technological advances were concentrated in the Global North, with the effect of holding Global South countries in colonial patterns as exporters of raw materials. Such dependency endured during the 1980s and 1990s in the form of subordinated integration, where Global North countries continued dictating technological agendas (Kreimer & Vessuri, 2018; Thomas et al., 1996; Velho, 2005).

In response, social movements in Latin America and Asia confronted the hegemonic idea of innovation being imposed onto Global South countries, either by refusing to engage with dominant frameworks and jargon of innovation (innovation speak), or by developing technologies that contested industrial growth and mass consumption goals. The Appropriate Technology movement, Social Technology Network in Brazil, and People Science Movement in India, are formidable examples (Fressoli et al., 2014; Pansera & Owen, 2018; Smith et al., 2016). Moreover, recent efforts to connect Indigenous culture with innovation in Latin American countries, though sporadic, have been increasingly documented (see Herrera et al., 2018; McLean, 2020; Jimenez et al., 2022).

Furthermore, while not fundamentally challenging the colonial dimensions of technology, recent innovation debates in the Global North have begun to critically examine the ideological underpinnings of dominant models of innovation, specifically those rooted in the logic of competition as well as the commodification and commercialisation of knowledge. For example, mission-oriented models proposed by Schot & Steinmueller (2018), or state-driven innovation policy by Mazzucato (2016), argue that market-driven innovation is essentially unable to produce the transformations needed for a transition to a non-carbon economy. Similarly, numerous calls seek to advance a new paradigm of 'responsible innovation' attuned to cultural, epistemological and political diversity (i.e. the pluriverse) in relation to development and change in the Global South (Escobar, 2018; Hartley et al., 2019).

Although dependency theories, as well as grassroots and counter-innovation movements, have questioned and actioned alternatives to existing North-South innovation discourse impositions since the 1970s, they have yet to succeed in creating alternative forms of innovation governance at national and regional levels (Ludwig & Macnaghten, 2020). This might be attributed to the continued global influence of Western innovation discourse and policy, which is reinforced by Global North trade and development agendas as well as Global South elites who embrace, promote and enact Anglo-Eurocentric systems of innovation governance (Sachs, 2010). In this way, the global geopolitics of

innovation and associated innovation discourses, policies and practices–what we outline above as innovation speak–serve to maintain colonial and neocolonial power relations, governance structures, and patterns of inequality and exclusion. We explore these below through the concept of coloniality of power.

3. Coloniality, innovation and exclusion

In the aforementioned literature, we explored the ideological and material underpinnings of the rise of innovation speak within innovation discourse in the context of development. In this section, we examine more closely how global innovation discourses are constitutive of neocolonial power structures that reinforce exclusion and marginalisation of racialised populations (Fasakin, 2021; Gandarilla Salgado et al., 2021). We begin with the notion of coloniality of power.

Coloniality of power refers to the persistence of postcolonial structures and institutions that maintain colonial-era systems of racialised material and cultural exclusion and exploitation (Grosfoguel & Georas, 2000; Quijano, 2000, 2007). As a concept, it aims to capture the complex and multifaceted ways legacies of colonialism and colonisation are reproduced, shaping global, national and communal power relations, material disparities, identities and intersubjectivity (Maldonado-Torres, 2016; Quijano, 2000). The idea of coloniality can seem abstract, in part because it is pervasive and "deeply embedded within the economic, political and societal institutions we inhabit" (Abdelnour, 2022, p.81). As scholars have long noted, the formal process of decolonisation did not result in significant changes to power relations because "the structure of the newly inaugurated nations preserved, in general, the same internal order established over the preceding three centuries" (Batalla, 1972, p. 118). Standards of innovation, science and knowledge production have thus entrenched colonial politics of expertise, normalising neocolonial relations and their associated material disparities (Abdelnour & Abu Moghli, 2021; Grosfoguel et al., 2015; Grosfoguel & Georas, 2000).

Central to the notion of coloniality of power is the hierarchical categorisation of peoples based on race and social power (Quijano, 1993, 2000; Rosenthal, 2018). As colonial systems of dominance and subordination were spread globally (Quijano, 2000), they embedded racial classifications within capitalist modes of exploitation and subjugation that were then imposed onto traditional and Indigenous peoples, institutions and societies (Ince, 2018; Leroy & Jenkins, 2021; Sondarjee & Andrews, 2022). These patterns of racial hierarchies endured in the post-colonial era, in part maintained by a global capitalist order that continues to operate along power dynamics established through colonial and imperial domination (Grosfoguel & Georas, 2000). They also came to be embedded within the very logic of modernisation, which saw those with access to capital racialised as inherently superior and those without racialised as inferior and therefore less capable (Virdee, 2019); or, stated alternatively, as less innovative. Global South elites with privileged access to technologies and their associated business models are able to enact their privilege for the purposes of capital accumulation, reinforcing racialised economic hierarchies (Ndlovu-Gatsheni, 2013).

Furthermore, as elites embrace dominant models and practices of innovation, they invest in technology and standards that further legitimate national adoption of global innovation discourse and associated ideals of technological superiority/inferiority and development/underdevelopment (Fasakin, 2021; Ndlovu-Gatsheni, 2013). Within this cycle of racialised innovation, Indigenous and minority populations inevitably manifest as subjects requiring modernisation and development (Gonzalez, 2015). Global South elites emulate these racialised economic aspirations and ideals, from capitalist accumulation to which frameworks of innovation are deemed nationally legitimate and desirable; in this way, national elites can be seen as key agents for maintaining the global coloniality of power (Mignolo, 2011). The globalisation of ideals, policies and practices of technological change and development, and their associated norms in relation to what it means to be a productive modern individual, are thus inseparable from elite privileges derived from colonial inequalities (Meyer & Jepperson, 2000).

Within these hierarchies, Indigenous peoples represent a particular type of racialised subject (Dastile & Ndlovu-Gatsheni, 2013; Garzón López, 2013). Notions of Indigenous and Native initially existed as exoticised, subjugated categories incorporated within colonial spheres of power, knowledge, and subjectivity. Thus Indigenous peoples are racialised and defined in relation to hegemonising culture and power. Consequently, Indigenous forms of knowledge were subordinated, ignored, and in the case of language, spiritual beliefs and practices, criminalised (Garzón López 2013). This is also evident in the case of intellectual property, where Indigenous communities face challenges protecting their knowledge, practising traditional livelihoods, and safeguarding collective resources.

This brings us to the proposition we seek to empirically examine, which is a contemporary analysis of how innovation speak has become dominant and is often utilised in processes of racialised exclusion and marginalisation, especially as experienced by Indigenous communities. In this case, we follow the lead of scholars who recognise the multiplicity of processes that objectify Indigenous peoples and knowledge (Garzón López 2013; Abdelnour & Abu Moghli, 2021): Indigenous knowledge is validated through processes by which it is either articulated or appropriated within dominant discourses of scientific knowledge, intellectual property and innovation.

4. Research context and design

This paper adopts a qualitative inductive research design utilising triangulated interview, fieldwork, and document data (see Table 1). Data were collected iteratively and a thematic analysis undertaken to explore how discourses of innovation, specifically innovation speak, enact coloniality of power in Peru. Peru was chosen as a suitable case study because it is a country shaped by colonial legacies (Desmaison et al., 2023) known to have contributed to inequality and division, especially between the capital city Lima and the rest of the country (Cox Hall et al., 2021). To combat institutionalised inequalities, Peru adopted an intercultural approach to public policy in the hopes of appealing to Indigenous groups who have actively resisted what they deem to be impositions of colonial models of development (Merino, 2020). Moreover, the Peruvian government has formally endorsed globally dominant innovation discourses by adopting frameworks and policies in line with the National Innovation Systems approach; policies which in turn shape

Table 1
Overview of empirical material.

Data Source	Description
Semi-structured interviews	Interviews with participants working in the innovation sector in Peru (17), including: innovation support providers (e.g. incubators, innovation labs, B Corp expert, university incubators) (9); social innovators and entrepreneurs (5); academic experts (2); and a government official (1).
Research diary	Memos consisting of observations, reflections, and insights from: fieldwork at Potato Park; analysis of legislation and policy documentation; post-interview reflections; and informal conversations.
Documents	A corpus containing official documents relating to the following: national regulations and legislation (e.g. science, technology and innovation laws that seek to catalyse and enhance Peru's innovation sector); national/Ministry-level reports (e.g. those outlining policies, strategies and programming specific to innovation across sectors); and international agency reports about Peruvian innovation sector funding and programming (e.g. World Bank, IBRD and OECD reports on innovation funding, policies and programming).Exemplars: Law 31,250 National System of Science, Technology and Innovation; Law 28,613 Law of the National Council of Science, Technology and Technological Innovation; We Promote Innovation in Peru (2021), Ministry of Production; Reviews of Innovation Policy: Peru (2011), OECD.

Science, Technology and Innovation programming and funding (Harman et al., 2022; Zuniga, 2016). For these reasons, Peru provides an opportunity to explore whether or how alternative interpretations of innovation are actualised.

The lead author undertook semi-structured interviews with key informants working in Peru's innovation sector in Lima between March and May of 2019. Snowball sampling was used to select key informants who met the research criteria of being involved in innovation-related activities in Lima. In total, 17 interviews were undertaken with experts across a variety of innovation-related roles in the private and public sectors, including academia and government: 9 innovation support providers, meaning those working with/in accelerators, incubators, innovation hubs, and university innovation labs; 5 social innovators and entrepreneurs; 2 academic experts on innovation in Peru; and a government official whose work focuses on innovation policy and promotion. It is worth noting that it was difficult to recruit government officials, as many of those approached dismissed the focus and purpose of this study. Interviews lasted up to 70 min and took place wherever participants indicated they felt most comfortable. An interview protocol focused on the characteristics of respondents' support for innovation practices through their work and perceptions of the innovation landscape in Peru. Interviews gave space for respondents to speak to the issues they deemed most relevant and ended when questions and resulting discussions led to no new information (Haenssgen, 2019). Informed consent was obtained from participants and anonymity was assured. Interviews were conducted in Spanish by the lead author, who is Peruvian and a first-language Spanish speaker.

Between interviews, the lead author undertook fieldwork at Potato Park, near Cusco, Peru. The Potato Park is a land-based collective focused on Indigenous approaches to conservation of Andean agrobiodiversity and livelihoods for multiple Indigenous communities (Jimenez et al., 2022). The fieldwork was an opportunity to examine the distinct approach to governance practised by Potato Park and learn participants' views on Indigenous approaches to innovation and development. Data was collected in the form of research diaries and observation, which included informal conversation. It was during the process of fieldwork that initial doubts were raised about national innovation policies promoted by Peruvian agencies, specifically with regards to a lack of access to innovation funding and support, as expressed by Indigenous innovators. The lead author chose to empirically follow this doubt (Locke et al., 2008) through follow-up interviews with participants, which created an opportunity to view tensions between the policies and innovation speak promoted by Peruvian innovation experts and Indigenous perspectives and practices. As the lead author pursued this line of inquiry, she found that experts and officials were less inclined to be interviewed, debated the very premise of the project, or provided justifications for why Indigenous people face exclusions. Such instances were captured in the form of memos that guided thematic coding (Braun & Clarke, 2012).

Data collected also include national innovation policies, reports, and international policy reviews. These documents aided our examination of the main assumptions associated with innovation discourse in Peru, as well as the material aspects of their implementation (Bortz & Thomas, 2017). Policy documents provide rich insight into the ideological construction and legitimation of economic and social problems, and what policy instruments are best suited to addressing them (Albornoz & Pérez Ones, 2020). Importantly for our investigation, we specifically examined Peru's national Science, Technology, and Innovation (STI) laws, policies, and mechanisms in order to determine whether stakeholders' ideas and reluctance towards Indigenous approaches to innovation were isolated incidents or part of a wider problematisation embedded within national and even global innovation discourse. These insights were also captured as memos, which likewise informed the trajectory of the thematic analysis.

A thematic analysis of the interviews was undertaken, guided by extensive insights and memos from both fieldwork and policy documents (Braun & Clarke, 2012). Analysis began with a thorough familiarisation with the data, followed by open semantic coding. Next, an iterative process of subtheme categorization took place utilising memos, resulting in seven subthemes (e.g. 'Dominance of technological innovation', 'Business Canvas', 'Perceptions of Peru lagging behind' and 'Elites rejecting project premise'). Patterns in the coded empirical material relating to imposition and exclusion led us to review the literature on coloniality of power and its possible relation to innovation discourse and development. Iterating between subthemes, codes, coded text and the literature, we were able to group sub themes along two broad themes: 'manifestations of innovation speak' and 'instrumentalising Indigenous culture' (see Table 2). Finally, as a confidence marker, we once again compared how the themes relate to each other, the overarching topic, memos, and empirical material (Maguire & Delahunt, 2017).

5. Findings

Peru's STI system was established in the late 1960s but underwent significant changes in the mid-2000s in order to address what international and national agencies identified as a weak institutional STI framework, limited links between firms and research institutions, and low levels of qualified human capital (World Bank, 2016). By 2011, the Organisation for Economic Co-operation and Development (OECD) reported that the Peruvian government had not taken a sufficiently proactive role to foster innovation, resulting in a lack of inclusive growth and poor innovation performance. This led to efforts to improve Peru's National Innovation System by "modernising its governance and effectiveness, as well as strengthening the conditions and incentives for business innovation" (Zuniga, 2016, p. 2). In response to the OECD's critique, various ministries revisited innovation-related policies and interventions. Efforts included the creation of a national law for the promotion of STI (hereafter 'STI Law'), a national policy for STI, and a number of national organisations, programmes, and initiatives aimed at enhancing the STI sector. Peru received loans from the World Bank and the Inter-American Bank to support the activities outlined in these legislative frameworks (World Bank, 2016).

These legislative changes were supplemented by a growth in university degrees teaching innovation and entrepreneurship, the establishment of incubators and accelerators, and private sector innovation laboratories. Today, Peru's legislative frameworks, policies, and programs are aimed at fostering a culture of innovation to drive economic growth and improvements in various sectors. The STI Law assigns a pivotal role to the government, implemented by a committee led by the National Council of Science, Technology, and Innovation. Emphasising STI as a catalyst for economic growth, the law is supported by the National Program for Scientific Research and Advanced Studies and the Peruvian Intellectual Property Rights (IPR) authority. Moreover, among the various initiatives is the National Innovation Programme for

Table 2
Theme descriptions.

Sub themes	Themes	Theme descriptions
Dominance of technological innovation Business Canvas Perceptions of Peru lagging behind	Manifestations of innovation speak	Western dominant ideologies influence what counts as innovation and how it should be promoted and adopted
Lack of Indigenous representation Elites rejecting project premise Quechua language with conventional innovation programs (Innovasuyu).	Instrumentalising Indigenous culture	Elites/participants replicate Western innovation ideas. Indigenous knowledge is only validated through the Western gaze, which delegitimises it and impedes full recognition

Competitiveness and Productivity (hereafter 'Innovate Peru'), which is led by the Ministry of Production. Innovate Peru aims to increase productivity by strengthening the actors of the innovation ecosystem (companies, entrepreneurs, and support entities) and facilitating their interconnection. This national program offers funding for technological missions, seed capital, and innovation programs to boost company innovation and technological implementation.

The above establishes the national context of innovation policy and programming within which our study was undertaken. Our thematic analysis resulted in two themes: "Manifestations of innovation speak" and "Instrumentalising Indigenous culture". We present these below.

5.1. Manifestations of innovation speak

Our findings highlight dominant framings of innovation that are also reflected in the literature, namely those emphasising the predominance of technological innovation and growth-making. Our findings also demonstrate a strong reliance on Western tools, such as the Business Canvas[1] and comparative analyses with Western contexts.

We noted a persistent inclination to assign greater value to Western innovation paradigms than Peruvian ones. For example, participants noted how innovation projects based in or from the West are more competitive or of higher quality than those in Peru, rendering Peru unfit for effectively competing on the same scale:

"If someone comes with a project to innovate, it is much better in Denmark than in Peru, for example, because there is more confidence." (Academic innovation expert).

"I think we don't have much to compete with, I'm not going to be more efficient than the Germans or the Israelis in agriculture, so what am I going to pay for them to do? Drones?" (Academic innovation expert).

These quotes indicate the prevailing idea that Western experiences are seen as superior. Some local experts consider that Peru, positioned as a peripheral participant in the global innovation landscape, should prioritise emulation and catch-up (Ndlovu-Gatsheni, 2013). Interestingly, some of the examples mentioned are grounded in military technologies (Abdelnour, 2023). The preference for Western experience and technologies resonates with studies about Innovate Peru's 'technological missions', which are initiatives for Small and Medium-Sized Enterprises (SMEs) to connect with foreign firms, technology parks or centres for knowledge transfer; when given the opportunity, Peruvian SMEs chose to mainly visit organisations in European countries as opposed to other countries in the region (Ortigueira-Sánchez et al., 2020). This idea is echoed in the proposal for the STI Ministry creation, which emphasises the importance of improving STI skills as a prerequisite for reaching 'developed country' status. The document cites countries known for their significant investment in innovation and research and development (R&D), such as Switzerland, Sweden, the United States, the United Kingdom, and the Republic of Korea.

Participants mentioned that there is a tendency for government competitions to prioritise technological solutions:

"If you see the [government-led] innovation contests, many of them condition you to something technological. I was talking with many colleagues about how there are now many people who are developing an app just so they could apply for the funds.".

"There is a very strong emphasis from [government organisation] towards technological innovation.".

This suggests that, various interpretations of innovation notwithstanding, the technology development perspective is advanced as desirable. In this way, innovation speak constrains innovation policy and practice within a technological lens, with the effect of relegating interest and support for alternative forms of innovation. This has a performative effect, compelling people to frame their ideas in technological terms because ultimately this is what is fundable.

A bias towards Western initiatives and experiences was prevalent in the tools and strategies used to promote innovation. When asked what methods or tools they used to support their work, some respondents cited design-thinking tools as the most beneficial for supporting innovation activity, with the Business Canvas being the most popular. At first glance, design-thinking appears to transition from competitive and impersonal rationales to more empathic practices, such as storytelling, prototyping with users, and experimenting (Irani, 2019). A further look, however, shows that design-thinking is promoted as a means of defending 'North American design' against global competition, and has become a dominant tool in innovation initiatives (Irani, 2018). Among the various design-thinking tools, the Business Canvas, devised by Osterwalder and Pigneur in 2010, is a widely embraced innovation tool for business models (Chin et al., 2021). Previous research has argued that, because the Business Canvas originated in the West, it does not suit the conditions and cultures of non-Western contexts where profit maximisation may come secondary to other objectives (Chin et al., 2021; Jimenez & Zheng, 2021).

As with universities globally, the Business Canvas is taught at Peruvian universities as part of innovation and entrepreneurship degree programs (Montalvo-Castro, 2016). This trend evolved as part of a growing emphasis on developing entrepreneurial skills for students who might wish to start their own enterprises. In Peru, who has access to entrepreneurship and innovation curricula also reflects a divide that separates those with privilege and those without, underpinned by a belief that "students from private schools have more entrepreneurial capacity, followed by students from parochial schools and finally those from public schools" (ibid., p. 159). Exposure to entrepreneurship and innovation teaching at Peruvian universities, especially top-ranked institutions, thus serves to reinforce national disparities in relation to who is able to access economic opportunities. Some interviewees even mentioned that having experience with the Business Canvas was a requirement for admission into exclusive social innovation programs or incubators:

"[W]hen I went to [name of organisation] contests, for example, they told me that's bad because you must first fill out the Canvas model." (Social innovator).

At the same time, a number of interviewees indicated that those requested to use Business Canvas in funding applications or to join workshops felt a lack of clarity around its usefulness. Still, there was little questioning of the inherent value or applicability of the Business Canvas in relation to admission into innovation programs and contests. Interviews also revealed how innovation tools such as the Business Canvas led to wider diffusion of associated ideas. For instance, in some cases individuals who attend entrepreneurship workshops would in turn use their attendance as a credential to teach others. As an example, one participant stated:

"Some people come with their business models that are very bad, but they have been to a workshop where they learned all about these tools, and they are invited to train others in entrepreneurship. So they trick people. They put 200 people in a 5-hour workshop, they tell them they're ready and then those 200 people are bouncing around." (Social innovator).

In this situation, we can see how the broader narrative of innovation impacts the popularity of a tool despite doubts about its utility. Business Canvas is critical to the diffusion of values that, in turn, shape and guide the way people work (Hasselbladh & Kallinikos, 2000). This suggests that innovation speak tools, once legitimised as essential for accessing funds and opportunities, reproduce a dominant way to think about innovation. This may also explain why tools like the Business Canvas are so pervasive, despite questions about their contextual relevance and

[1] The Business Canvas (or business model canvas) is a popular tool used to visually describe how an organisation delivers and captures value. It is proposed to help organisations better understand their customers, value proposition, how to manage their business, and possibilities for innovation (Osterwalder & Pigneur, 2010).

utility.

We also noted a complex relationship between those who promote innovation speak in Peru and Indigenous peoples. On a number of occasions, the research project's core premise was criticised on the grounds it assumed Indigenous people in Peru possessed intrinsic innovative capacities. This criticism came up regularly. Further, the first author was sometimes asked to show examples of Indigenous peoples' contributions to innovation. In some cases, examples of Indigenous innovations shared were discredited.

5.2. Instrumentalising Indigenous culture

Our findings show that while innovation policy recognises Indigenous knowledge, Indigenous peoples are excluded from innovation governance and their innovations receive minimal support. This suggests an instrumentalisation of Indigenous culture without meaningful inclusion, even though Peru's public policies are guided by an intercultural approach (Merino, 2020) that centres on the elimination of discriminatory practises based on ethnic-racial origin and the celebration of cultural diversity. The STI Law incorporates this notion, as stipulated by Objective 3, which aims to:

"Revalue traditional knowledge and seek to improve the technologies linked to this knowledge, identifying and making use of its complementarity with modern technologies, recognizing indigenous or native peoples as holders of this knowledge, considering Law 27811, Law that establishes 'the regime for the protection of the collective knowledge of indigenous peoples linked to biological resources, as applicable.'" (p.5).

Moreover, the STI policy aims "To promote the development of scientific research, technological development and technological innovation that promote the revaluation of the collective knowledge of indigenous or native peoples" (p. 23). Having these explicit statements in both the law and policy suggests that Indigenous participation and traditional knowledge are important components of the institutional and legal framework of innovation.

An example of how this manifests can be found in the Peruvian IPR authority. Besides holding the typical IPR mechanisms and policies, this government body has mechanisms that aim to protect knowledge relevant to Indigenous people. One of these mechanisms is a collective knowledge registry, which is primarily concerned with knowledge about "biological resources". This registry is proposed as a way to avoid biopiracy, which has severely affected Indigenous peoples in Peru, and protecting Indigenous knowledge.

While this might sound promising, prior research has indicated that Peru's innovation policies have a tendency towards exclusivity, with a primary emphasis on supporting SMEs and women engaged in STI, particularly in university settings (Harman et al., 2022). A further look at the innovation governance shows that there are no mechanisms that reflect the State's active role in the effective engagement of Indigenous expertise in the implementation of public policies. The STI policy does not have any Indigenous representative in its governance. Neither does the National Council of STIs, whose membership includes representatives from the Ministry of Economy, SMEs, Universities and the IPR authority. Moreover, there are no dedicated or tailored programmes under the National Innovation programme that explicitly support or address the needs of Indigenous peoples or communities. In other words, they do not have projects focused solely on Indigenous challenges or innovations. This suggests that Indigenous populations have very few opportunities for active engagement or participation.

Moreover, Indigenous organisations cannot directly contact the STI research council for financing for projects or programmes. If Indigenous organisations want to access the funding, they need to partner with actors from the accepted categories (research institutions, NGOs, etc). Consequently, although the importance of Indigenous people and knowledge is mentioned in the legislation, there are no mechanisms through which Indigenous peoples themselves can directly receive government innovation support. This raises questions about the intercultural approach and the role of the state in reproducing the marginalisation of Indigenous communities (Merino, 2020).

The exclusion of Indigenous peoples from innovation initiatives may be influenced by how international organisations frame innovation, and how national mechanisms for protection are engaged with or disregard. For instance, a 2016 World Bank report regarding a loan to the Peruvian government for enhancing the STI sector stated that: "the safeguard policy on Indigenous Peoples (OP/BP 4.10) is not triggered because the project will operate in main urban areas where the IPs do not meet the requirements of the policy." (World Bank, 2016p.17). The report reproduces an understanding of Indigenous peoples being at the periphery: that Indigenous peoples neither reside in urban areas nor are they impacted by urban-focused programming. Moreover, the phrase "do not meet the requirements" might also reflect an assumption that Indigenous peoples are not involved in the types of innovation recognised or promoted by the policy, reflecting their deeper exclusion from such initiatives.

We also noted an instrumental use of Indigenous knowledge and customs. The Peruvian government's 'Innovasuyu' initiative serves as a compelling example of this. Operating under the Ministry of Production, this nationwide program is committed to cultivating an innovation ecosystem that spans the country. Innovasuyu brings together seven regions in Peru, with the goal of fostering and enhancing innovation and entrepreneurial networks, decentralising the focus from Lima, and providing support to regions that traditionally lack access to established innovation support systems.

The name Innovasuyu holds local significance as it incorporates the Quechua term *suyu*, which translates to 'region' or 'area'. Although most Peruvians may not be fluent in Quechua, the term suyu resonates widely owing to its association with the concept of *tahuantinsuyo*.[2] Innovasuyu's mission is to underscore local value while placing innovation at the forefront, and it does so by connecting innovation with the familiar suyu concept. In addition to signifying the Peruvian government's commitment to decentralising authority from Lima and stimulating regional innovation, Innovasuyu incorporates local language and symbols into its marketing materials, featuring images of Andean textiles and farmers showcasing their products on various social media platforms. However, beyond these cultural elements, Innovasuyu, as a national innovation ecosystem program, embraces the conventional approach to innovation development. Its core focus lies in innovation as growth and private sector development, with a focus on corporations, SMEs, startups, and mainstream innovation tools. The utilisation of Quechua words without Quechua speaking peoples was pointed to by one interviewee:

"In the social innovation world, out of 100 people, I think only 1 would speak Quechua. And only because they have studied it, they're not even from the Andes.".

Moreover, we noted scepticism towards Indigenous people and their relationship with innovation. On one occasion, a policymaker expressed the belief that Indigenous knowledge could only be validated by thorough scientific analysis. Similarly, this policymaker contended that Indigenous people could not be categorised as entrepreneurs since they lacked necessary formal education. This again reflects the primacy of innovation discourse the way in which innovation speak is constitutive of scepticism towards Indigenous models of innovation.

Thus, while national laws and policies do acknowledge the importance of Indigenous knowledge and practices for innovation, the mechanisms through which Indigenous people can be active members in STI is less clear, with the effect of excluding Indigenous peoples from active involvement in innovation initiatives.

[2] Tahuantinsuyo is Quechua for "region," and refers to the four divisions into which the Inca empire was split.

6. Discussion

In the previous sections we presented two key arguments. First, that innovation speak in Peru emphasises technological innovation, prioritises growth, and favours comparisons with Western contexts. Second, by illustrating the example of Peru STI policy and practices, we argued that the same discourse has a potentially performative effect which directly affects those who are racialised and marginalised. These combined elements of innovation speak serve as tools to reinforce the coloniality of power and have become central to development discourse, reflecting primarily the interests of global and national elites.

The notion that innovation is important in order for countries to progress is founded on a variety of assumptions regarding its purpose (Pansera & Owen, 2018; Pansera & Fressoli, 2021). The ubiquity of innovation speak manifests in policies, programs, and people's perspectives. It determines which tools become popular (e.g. Business Canvas) as well as which types of innovations get funded (e.g. predominately technological innovations), enabling or disrupting social practices (Pansera & Fressoli, 2021). This constrains the view of innovation as something that is patentable, commercially viable, and technologically advanced (de Saille & Medvecky, 2016). Our findings show that it also shapes the perspective of who is entitled to innovate, and who ultimately is able to gain access to innovation-related opportunities and support, and who is excluded from these. Hence, innovation speak not only shapes perceptions, influences decisions, and defines the contours of what is deemed innovative, but also demonstrates performative effects on funding, support structures, eligibility criteria, and the identity of innovators. Innovations that align closely with the prevailing discourse may be more likely to secure financial support, potentially sidelining alternative ideas. Innovations that do not conform to this prescribed framework often remain unrecognised, uncelebrated, and unvalued within mainstream discourse. This process has much to do with the way innovation is defined and used in official documents, at universities, and in common language. Nevertheless, the discourse surrounding innovation is not merely a matter of definitions; rather, it is about how this discourse, shaped by specific actors, delineates the boundaries of what can and cannot be considered innovation, thereby constraining and limiting imaginaries of technological and social change.

Previously literature has highlighted the need to challenge the assumption that innovation primarily originates from specific geographical areas. As Shearmur (2015) and Eder (2019) argue, innovations from less prominent or peripheral regions are often marginalised in favour of high-tech growth. Our paper further contends that this concentration of innovation is shaped not only by geography but also by racial and colonial structures, which influence what is and is not recognised as innovation, and consequently, who are and are not recognised as being innovative. We argue that these processes are in continuity with colonial logics and economic and cultural forms of subordination, representing what Quijano (2007) describes as the interlinks between capitalist logics and unequal race and social power relations. Innovation speak responds primarily to the perspectives and interests of an international and national elite as opposed to those who are racially marginalised and discriminated against in society, such as Indigenous populations (Canfield, 2023; Cozzens & Thakur, 2014). Even though they are still part of a productive system, they are seen as having low chances of producing high growth and not valuable for the pursuit of innovation. Their language and knowledge are part of the innovation discourse (i.e. national programs like Innovasuyu), but they are not eligible for these services. This framing of innovation shapes aspirations and visions of national elites reinforcing their internal status vis-a-vis racialised communities (Irani 2019).

Innovation speak not only highlights but also perpetuates the notion that innovation activity in Peru trails behind Western counterparts. This narrative implies a perception of playing catch-up in innovation, consequently mirroring a catch-up in development terms. The view that Peru should not pursue design innovation owing to existing competition implies that Western, or more generally, non-local, technology adoption is the most suitable option (Aubert, 2005). This linear form of development, as scholars have previously pointed out, ignores the impact of colonialism (Kvangraven & Kesar, 2022). Importantly, as our findings indicate, this view does not necessarily arise from outside; rather, those involved in Peru's innovation sector seek to mirror, imitate and compare innovation activity elsewhere. This underscores that the elites and participants engaged in innovation in Peru are greatly influenced by 'global' (i.e. Anglo-Eurocentric) ideologies underpinning innovation. In this way, innovation speak can be understood as central to how coloniality of power is maintained and reinforced.

Our study contributes to work that understands Innovation speak as simultaneously advancing Western universal principles while subordinating and excluding racialised communities (Jimenez et al., 2022). At the core of this dynamic is the positioning of racialised groups as having subordinate status. This prevailing narrative promoted within innovation speak not only marginalises racialised communities but makes use of their knowledge and language. This can be understood as a means to enhance local legitimacy and present national innovation as unique and culturally rooted, even when racialised communities such as Peru's Indigenous peoples are excluded from innovation funding and support.

At first glance, it may seem that Indigenous groups might not prioritise using traditional innovation resources, given more immediate challenges such as extractivism and poverty (Anthias, 2018; Bretón, 2022). However, our engagement with the Potato Park suggests this assumption is not accurate. We are not suggesting that Indigenous people should be included solely because they might offer better or more inclusive ideas, which would risk essentialising them and their culture (Lehmann, 2022). Instead, we emphasise how they are systematically disadvantaged and excluded from the innovation sector, a problem rooted in the colonial logics and legacies that permeate innovation discourse and manifest in innovation speak. This exclusion is not just an issue of epistemic or cultural marginalisation, but has very real, material consequences for racialised and Indigenous peoples, including limiting or outright denying them access to funding, resources, and institutional support.

Colonial legacies enacted by discourses of technological innovation not only define the boundaries of what is considered a legitimate and valuable innovation, but they can also reproduce ideals and practices of innovation that reinforce the coloniality of power through violence (Abdelnour, 2023). This is starkly demonstrated by the aforementioned interviewee reference to Israeli and drones, a technology developed through a long history of surveillance and violence (Chandler, 2022).

This work contributes theoretically to the growing literature on the global ideology of innovation and development (Canfield, 2023; Jimenez et al., 2022; Pansera & Martinez, 2017; Pansera & Owen, 2018; Papaioannou & Srinivas, 2019). We show how pervasive innovation speak is in policy and practice, and how it reinforces exclusionary outcomes, particularly for racialised groups. The emphasis on innovation supports a system in which certain people hold privileged positions, aggravating racial imbalances. Notably, our research emphasises the critical role of elites in maintaining existing power structures (Ndlovu-Gatsheni, 2013). This insight deepens our knowledge of how the global ideology of innovation is not simply a result of modern practices, but is also inextricably linked to historical processes of colonisation and power dynamics, all within the context of the overall logic of growth.

Despite our critique of innovation discourse and innovation speak, it is our view that countries of the Global South need not entirely reject nor dismiss innovation speak as untouchable colonial constructs. Rather, we take the view of scholars who advocate for the creation of spaces where alternative conceptualisations of technological change can be debated, nurtured, and experimented with (e.g. see Arboleda, 2021). In the words of Ludwig & Macnaghten (2020, p. 28):

"Simply eliminating the term 'innovation', however, does not solve the challenge of having to identify positive resources for change in

contexts where many traditional communities are threatened in their existence through economic exploitation, ecological destruction, and loss of cultural as well as linguistic diversity. Alternatively, one may seek to reconfigure 'innovation' in a way that does not presuppose a narrow modernist outlook.".

Finally, we recognise that our findings are bounded by our interviews and fieldwork, and as such we do not claim that our study characterises the entire context of innovation in Peru. At the same time, our study suggests that an understanding of innovation as development is incomplete without appreciating how innovation speak both perpetuates colonial legacies and reinforces postcolonial exclusion. It does so by reproducing power structures that prioritise colonial ideals and agendas, which in turn limits the viability of innovation as a driver of inclusive, sustainable development.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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