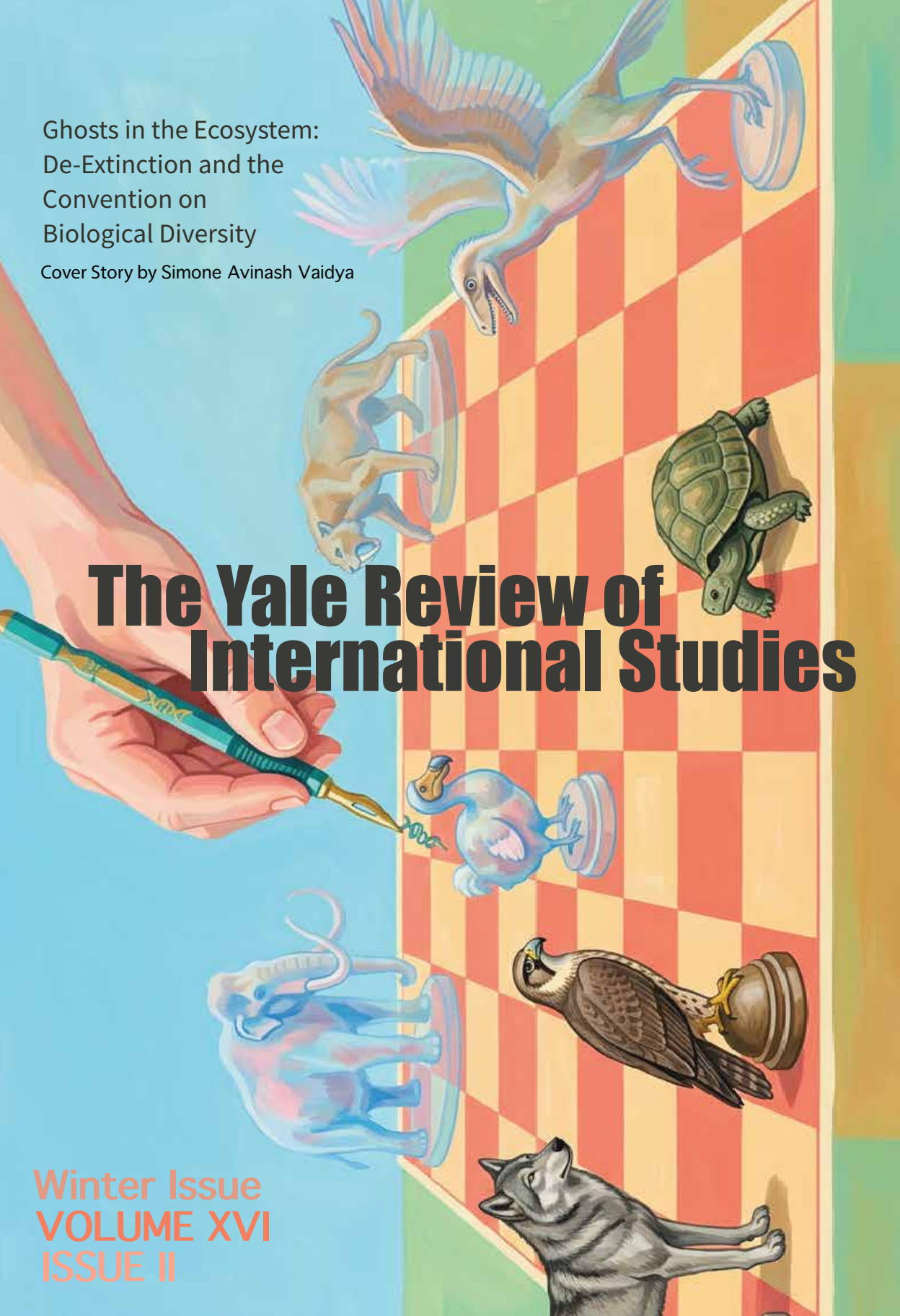
Ghosts in the Ecosystem: De-Extinction and the Convention on Biological Diversity

Cover Story by Simone Avinash Vaidya



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Dear Reader,

We are honored to open the 16th edition of the YRIS Winter Issue. You will find a wide range of topics represented in this issue: the first piece evaluates de-extinction efforts and their alignment with the Convention on Biological Diversity; the second analyzes Korean and Japanese soft power initiatives as a model for other nations; and the final piece examines the impact of railroads on Chinese government and trade. In publishing these essays, we hope to convey that global affairs takes many shapes across different countries and contexts, impacting not only international relationships but also individual people and environments around the world.

This year, we underwent the challenging task of narrowing dozens of diverse essays down to just three pieces for publication. This process was incredibly difficult and took substantial time and effort from our editorial board, whom we want to thank for all of their hard work over the past year. After the pieces were selected, our design team went to work on designing our cover and formatting every page of the publication you are holding. We extend our gratitude to our Head Design Editors Camille Roussel and Yasmine Samolada for putting in so much energy and creativity to make this issue possible.

We also want to thank you, the reader. YRIS aims to make global affairs accessible to everyone and allow our writers the opportunity to write about topics they are passionate about for diverse audiences. We appreciate you taking the time out of your day to enjoy these articles, learn something new, and think critically about the world we live in. Happy reading!

Sincerely,
Kate Bingham and Vittal Sivakumar
Editors-in-Chief

SHOUBHIT DAFTUAR
SIMONE AVINASH VAIDYA

DANIEL ASHE

JAIME ESQUENAZI

Essays

Shoubhit Daftuar
Simone Avinash Vaidya

Ghosts in the Ecosystem: De-extinction and the Convention on Biological Diversity

Introduction

In April 2025, the scientific community witnessed landmark leaps and bounds in the application of biotechnology with the 'resurrection' of the dire wolves, a species that went extinct over 10,000 years ago.[1] Scientists at Colossal Biospheres successfully decoded its genome, reconstructed it using the genetic framework of the gray wolf, and employed domestic dogs as surrogates to produce living proxies of the species.[2] This process of recreating proxies of extinct species is referred to as 'de-extinction'.

Although such initiatives attract global attention and are frequently presented as innovative tools for ecological restoration, they also generate complex legal and ethical questions. At the centre of this debate lies the Convention on Biological Diversity ('CBD'),[3] the primary international instrument governing the conservation and use of biodiversity.[4] The CBD rests on three objectives of conservation of biological diversity, sustainable use of its components, and the fair and equitable sharing of benefits derived from genetic resources.[5] These objectives embody the recognition that biodiversity is not only an ecological foundation but also a socio-economic resource, requiring careful stewardship to ensure its availability for future generations.

1 Alexandre Azevedo & Manuel Magalhães-Sant'Ana, *Reviving the Dire Wolf? A Case Study in Welfare Ethics, Legal Gaps, and Ontological Ambiguity*, 15(13) Animals 1, 1(2025).
2 The Process: Dire Wolf – Science, Colossal, https://colossal.com/direwolf/science/ (last visited Sept.15, 2025).
3 Erin Okuno, Frankenstein's Mammoth: Anticipating the Global Legal Framework for De-Extinction, 43(58) Eco. Law Quar. 581, 581-633 (2016).
4 Convention on Biological Diversity, Jun. 5, 1992, 1760 U.N.T.S. 79.
5 *Id.* at art. 1.

Innovations such as de-extinction increasingly challenge the scope of these objectives. By reintroducing species into ecosystems from which they disappeared aeons ago, de-extinction has given rise to a contentious scholarly debate among scientific and legal communities alike. Proponents argue that it offers opportunities to restore disrupted ecosystems, generate scientific knowledge, and stimulate socio-economic benefits through eco-tourism.[6] Critics, however, caution that it risks destabilising existing ecological balances,[7] diverting funding and attention from extant endangered species,[8] and undermining the equitable framework envisioned by the CBD.

Against this backdrop, this paper seeks to demonstrate whether the CBD provides an adequate framework to address the legal concerns raised by de-extinction and to clarify the status of de-extinct organisms under international environmental law and their potential regulation. The paper also seeks to evaluate whether such projects withstand scrutiny under the precautionary principle, and to assess the extent to which de-extinction aligns with the Convention's overarching objectives.

"BY REINTRODUCING SPECIES INTO ECOSYSTEMS FROM WHICH THEY DISAPPEARED AEONS AGO, DE-EXTINCTION HAS GIVEN RISE TO A CONTENTIOUS SCHOLARLY DEBATE AMONG SCIENTIFIC AND LEGAL COMMUNITIES ALIKE."

Applicability of the Convention on Biological Diversity

The CBD was negotiated and signed in 1992,[9] in the backdrop of the Rio De Janeiro Earth Summit. After more than thirty years of the ratification of this treaty, there has been a global failure to preserve biodiversity. Initiatives such as the Decade on Global Biodiversity only left an underwhelming impact.[10] This brings the modern relevance of the Convention into question, particularly in light of subsequent instruments that outline protocols and create additional instruments to certain provisions.[11]

6 Rishabh Srikar, Can Species De-extinction Actually Restore Nature?, Think Wildlife Foundation (Aug. 9, 2023), https://thinkwildlifefoundation.com/can-species-de-extinction-actually-restore-nature/ (last visited Sept. 15, 2025).

7 International Union For Conservation Of Nature, IUCN SSC Guiding Principles On Creating Proxies Of Extinct Species For Conservation Benefit 1 (2016).

8 Marco Restani & John M. Marzluff, *Funding Extinction? Biological Needs and Political Realities in the*
Allocation of Resources to Endangered Species Recovery, 52(2) Bioscience 169, 175 (2002).

9 Convention on Biological Diversity introduction, Jun. 5, 1992, 1760 U.N.T.S. 79.

10 BlueSci, *UN Decade on Biodiversity ends with failure to achieve all conservation targets* (Oct. 3, 2020), https://www.bluesci.co.uk/posts/un-decade-on-biodiversity-ends-with-failure; World Wild Fund, *World fails to meet decade long biodiversity targets as unequivocal loss of biodiversity reported* (Sep. 15, 2020), .https://www.wwf.mg/?850241/World-fails-to-meet-decade-long-biodiversity-targets-as-unequivocal--loss-of-biodiversity-reported; Manleen Dugal, *Will the 2030s Be the Decade for Global Biodiversity Conservation?* (May 31, 2023), https://earth.org/global-biodiversity-conservation/.

11 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010, 3109 U.N.T.S. 3; Kunming–Montreal Global Biodiversity Framework, Decision 15/4, U.N. Doc. CBD/COP/DEC/15/4 (Dec. 19, 2022); Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29,

It is essential to understand how de-extinction fits into such a framework in the light of the "obsolescence" of the CBD, as biotechnology seems to outpace traditional definitions of environment and biodiversity. Existing legal frameworks fail to account for the rapid evolution of technological processes in efforts in furtherance of biological conservation, or arguably, the pandering to scientific curiosity. De-extinct animals evade precise definitions under the CBD, due to their novelty and uncertainty around characterisation. The CBD's beauty lies in its structure, with distinct provisions outlining obligations tailored to the needs of the circumstance at hand.

Article 2 defines biodiversity expansively as "variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part."[12] This definition does not presuppose organisms that exist naturally within ecosystems and extends to any living organism. Therefore, while de-extinct organisms are artificially engineered proxies that emerge from laboratory consideration and not from ongoing evolutionary processes,[13] it is difficult to argue that they would not constitute an "element of biodiversity".

Since the CBD does not define the term "species", it is essential to assess its ordinary meaning through biological and phylogenetic concepts,[14] both of which presuppose reproductive continuity within natural populations. In such instances, de-extinct organisms are not members of continuous populations, but are isolated individuals created *ex nihilo*.[15] Their genomes are often patched with DNA from related species, rendering them hybrids rather than genuine revivals.[16] Their traits may diverge significantly from extinct ancestors due to incomplete genomic fidelity or the influence of surrogate species during development.[17] There are three likely definitions under which de-extinct organisms would fall- 1) , living modified organisms, triggering obligations under the Cartagena Protocol on Biosafety (2020); 2) , as derivatives of genetic resources, which fall under the Nagoya Protocol on Access and Benefit-Sharing (2010); and 3) , as alien species under the CBD itself.

Living Modified Organism ('LMO')

An LMO is defined as "any living organism that possesses a novel combination of genetic material obtained through modern biotechnology."[18] Similarly, Article 3(i) of the Cartagena Protocol delineates that "modern biotechnology" is inclusive of in vitro nucleic acid techniques and cell fusion methods beyond the taxonomic family.[19] De-extinct organisms fit squarely within this defini-

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2000, 2226 U.N.T.S. 208.

12 Convention on Biological Diversity art. 2, Jun. 5, 1992, 1760 U.N.T.S. 79.

13 Dusko Ilic, *Engineered proxies and the illusion of de-extinction*, 20(6) Stem Cell Reports 1, 1-3; Philip J. Seddon & Mike King, *Creating proxies of extinct species: the bioethics of de-extinction*, 3(6) Emerg Top Life Sci 731, 731-735 (2019).

14 Vienna Convention on the Law of Treaties art. 31, May 23, 1969, 1155 U.N.T.S. 331.

15 Jessie L. Beier, *No Going Back: Un-Fixing the Future of De-Extinction*, ASJ: After Sustainability Journal, 163, 163-184 (2023); Alexandre Robert et al., *supra* note 13, at 1003-1009.

16 *Id.*

17 *Id.*

18 Cartagena Protocol on Biosafety to the Convention on Biological Diversity art. 3(g), Jan. 29, 2000, 2226 U.N.T.S. 208.

19 Cartagena Protocol on Biosafety to the Convention on Biological Diversity art. 3(i), Jan. 29, 2000, 2226 U.N.T.S. 208.

tion, regardless of whether they are reconstructed through CRISPR gene-editing, cloning or hybridisation with surrogate species.[20]

Article 8(g) of the CBD itself obliges states to regulate or manage "the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts."[21] This demonstrates that the CBD drafters foresaw the emergence of synthetic organisms whose ecological impacts are uncertain. This categorisation has two implications. First, any release of de-extinct organisms requires prior risk assessment and the precautionary measures mandated by Cartagena Protocol Articles 7–10 and 15.[22] Second, it undermines the narrative that de-extinct organisms inherently serve conservation. The treatment of LMOs under the CBD and Cartagena Protocol depicts that they are potential biohazards requiring serious controls.

Derivatives of Genetic Resources

Beyond their status as *LMOs*, de-extinct organisms also qualify as "derivatives" of genetic resources under the Nagoya Protocol on Access and Benefit-Sharing (2010).[23] Article 2(c) defines a derivative as "a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity."[24]

Ancient DNA extracted from fossils or preserved specimens is itself a genetic resource.[25] When this DNA is sequenced, synthesised, and applied through biotechnology to reconstruct organisms, the resulting organisms are best understood as derivatives, or products arising from the utilisation of genetic resources. The Nagoya Protocol has deliberately adopted a broad concept of utilisation in anticipation of advancements and expansions of the global biotechnology sector.

This characterisation matters for two reasons. First, it outlines obligations pertaining to access and benefit-sharing (ABS). States, as well as indigenous peoples and local communities, retain rights under Article 15 of the CBD, and the use of derivatives must respect prior informed consent and mutually agreed terms.[26] De-extinction projects that proceed unilaterally without ABS arrangements violate these provisions. Second, construing de-extinct organisms as derivatives reveals a definitional tension. Proponents claim they are "restored species", but they are, in fact, new constructs built upon the informational derivatives of ancient genetic material.

20 Jeffrey Kluger, *The Science Behind the Return of the Dire Wolf*, (Apr 7, 2025), https://time.com/7275439/science-behind-dire-wolf-return/.

21 Convention on Biological Diversity art. 8(g), Jun. 5, 1992, 1760 U.N.T.S. 79.

22 Cartagena Protocol on Biosafety to the Convention on Biological Diversity art. 7-10, Jan. 29, 2000, 2226 U.N.T.S. 208.

23 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010, 3109 U.N.T.S. 3

24 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity art. 2(c), Oct. 29, 2010, 3109 U.N.T.S. 3

25 Convention on Biological Diversity art. 2, Jun. 5, 1992, 1760 U.N.T.S. 79.

26 Convention on Biological Diversity art. 15, Jun. 5, 1992, 1760 U.N.T.S. 79.

"ANCIENT DNA EXTRACTED FROM FOSSILS OR PRESERVED SPECIMENS IS ITSELF A GENETIC RESOURCE. WHEN THIS DNA IS SEQUENCED, SYNTHESISED, AND APPLIED THROUGH BIOTECHNOLOGY TO RECONSTRUCT ORGANISMS, THE RESULTING ORGANISMS ARE BEST UNDERSTOOD AS DERIVATIVES..."

With de-extinct organisms being considered a "species" under the definition of the CBD, they are likely to be characterised more precisely as an alien species. Article 8(h) of the CBD requires Parties to "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species."[27] This obligation applies regardless of whether the alien species is invasive by design since the central concern is ecological disruption.

Since "alien species" have not been defined under the CBD, recourse must be taken to the *travaux preparatoires* to ascertain the meaning, as delineated under Art. 32 of the VCLT.[28] The Travaux defines alien species as "a species occurring in a particular country or area outside its historically known natural range, as a result of intentional or accidental dispersal by human intervention."[29]

De-extinct animals could be alien species, depending on the recency of the extinction of the original species. Their historical range does not necessarily exist as it did at the moment of extinction. In the intervening centuries or millennia, ecosystems have undergone ecological succession, with climate change, shifts in predator-prey balances and transformations in vegetation structures.[30] Introducing a resurrected organism into contemporary ecosystems does not return it to a "natural range" but is, in fact, a transplantation into a new, ecologically distinct ecosystem. It is therefore alien in relation to current biodiversity.

The CBD itself embeds a negative presumption against alien species by assuming that the introduction of alien species presents an inherent risk to ecology. The CBD outlines the precautionary principle in its Preamble and codifies it under Article 14. This necessitates a thorough assessment of the ecological impact of de-extinction projects from an environmental perspective. The next section assesses the effect of such projects from rewilding and confinement perspectives, arguing that it does not meet the thresholds delineated in the precautionary principle.

The Effect of Such De-extinction Projects from Rewilding and Confinement Perspective

The CBD incorporates the precautionary principle within its Preamble and explicitly codifies it under Article 14.[31] It rejects any justification for delayed action based on the absence of full scientific certainty when serious ecological harm is at risk.

De-extinction projects, which proceed amidst significant scientific uncertainty and a dearth of comprehensive research on their ecological outcomes,[32] pose a substantial threat of biodiversity loss.

27 Convention on Biological Diversity art. 8(h), Jun. 5, 1992, 1760 U.N.T.S. 79.

28 Vienna Convention on the Law of Treaties art. 32, May 23, 1969, 1155 U.N.T.S. 331.

29 Intergovernmental Comm. for the Cartagena Protocol on Biosafety, Report of the Intergovernmental Committee for the Cartagena Protocol on Biosafety on the Work of Its First Meeting, U.N. Doc. UNEP/CBD/ICCP/1/2 (Mar. 27, 2000).

30 Alexandre Robert et al., *De-extinction and evolution*, 31 Func. Ecology 1021, 1023 (2017); Cynthia N. Chang & Benjamin L. Turner, *Ecological succession in a changing world*, Journal of Ecology 503, 503 (2019); Zak Ratajczak et al., *Abrupt Change in Ecological Systems: Inference and Diagnosis*, 33(7) Trends in Eco. & Evo. 513, 523 (2018).

31 Convention on Biological Diversity art. 14, Jun. 5, 1992, 1760 U.N.T.S. 79.

32 *Infra* note 53.

The garb of environmental restoration cannot be used to hide the reality that reviving a single extinct species is unlikely to lead to meaningful systemic ecological change. As delineated in the previous section, environments are dynamic and structurally complex and evolve over time. This entails that newly introduced organisms generally integrate poorly within these existing networks.

The fundamental question arises as to whether either pathway for such organisms, rewilding or confinement, can be sustainably implemented while meeting the strict standards dictated by Article 14's precautionary principle. This section argues that neither approach effectively safeguards biodiversity, with both jeopardising



"THE CBD ITSELF EMBEDS A NEGATIVE PRESUMPTION AGAINST ALIEN SPECIES BY ASSUMING THAT THE INTRODUCTION OF ALIEN SPECIES PRESENTS AN INHERENT RISK TO ECOLOGY."

the integrity of current ecosystems instead of conserving them, albeit in distinct manners.

Rewilding

Rewilding initiatives seek to recover lost ecological functions by introducing organisms into natural or semi-natural environments. However, this process has the potential to destabilize ecosystems that have adapted over time, leading to risks such as invasiveness and disease transmission.

Ecosystems are inherently non-static and transform through succession.[33] They transform through non-linear ecological succession, often triggered by anthropogenic influences or natural evolutionary processes.[34] For example, attempts to reintroduce species such as the dire wolf are bound to fail to account for significant ecosystem shifts, changes in predator-prey dynamics, vegetation patterns and climate. These changes have effectively eliminated the original ecological niche of these species.[35] Restoration of a single species seldom achieves a state shift,[36] and instead, reintroduced

33 Cynthia N. Chang & Benjamin L. Turner, *Ecological succession in a changing world*, Jour. of Ecol. 503, 503 (2019).

34 Zak Ratajczak et al., *Abrupt Change in Ecological Systems: Inference and Diagnosis*, 33(7) Trends in Eco. and Env. 13, 523 (2018)

35 Alexandre Robert et al., *De-extinction and evolution*, 31 Func. Ecol. 1021, 1023 (2017).

36 Douglas J. McCauley et al., *A mammoth undertaking: harnessing insight from functional ecology to*

organisms may function as novel species with unpredictable ecological consequences.[37]

A primary concern with rewilding is of invasiveness, whereby these proxy species could outcompete native species for essential resources, potentially leading to declines in native populations or alterations in the community structure.[38] Moreover, rewilded organisms, especially those engineered from distant or extinct lineages, carry the risk of introducing novel pathogens into ecosystems, which could have unpredictable and harmful effects on native species.[39] Furthermore, ecological disruption appears as a serious threat. Hybridization with native species, changes to food web dynamics, and parasite spillover events can undermine the stability and resilience of ecosystems.[40]

"A PRIMARY CONCERN WITH REWILDING IS OF INVASIVENESS, WHEREBY THESE PROXY SPECIES COULD OUTCOMPETE NATIVE SPECIES FOR ESSENTIAL RESOURCES, POTENTIALLY LEADING TO DECLINES IN NATIVE POPULATIONS OR ALTERATIONS IN THE COMMUNITY STRUCTURE."

Despite these risks, the scientific community faces persistent issues and uncertainty about the precise ecological outcomes of rewilding.[41] In the background of the lack of definitive evidence and the potential for serious harm, the precautionary principle advises cautious and conservative approaches.[42] Current research does not conclusively establish that the ecological benefits of rewilding sufficiently outweigh its risks to biodiversity,[43] necessitating careful evaluation and prudence in implementing such projects.

Confinement

Confinement entails maintaining organisms in controlled facilities such as research centres or zoological parks, thereby preventing

shape de extinction priority-setting, 31 Func. Ecol. 1006, 1009 (2017).

37 International Union For Conservation Of Nature, Guidelines for Reintroductions and Other Conservation Translocations 4 (2016).

38 Fatmata Sesay et al, *Invasive Species and Biodiversity: Mechanisms, Impacts, and Strategic Management for Ecological Preservation*, 23(9) Asian Jour. on Environ. & Eco. 82, 83 (2024).

39 Christian Selbach et al., *Parasites Lost: Neglecting a Crucial Element in De-Extinction*, 34 Trends in Parasitology 9, 9-11 (2018)

40 International Union for Conservation of Nature, IUCN SSC Guiding Principles on Creating Proxies of Extinct Species for Conservation Benefit 9 (2016).

41 International Union for Conservation of Nature, *The Benefits and Risks of Rewilding*, Issues Brief, (Jun. 2021), https://www.iucn.org/resources/issues-brief/benefits-and-risks-rewilding/

42 Report of the United Nations Conference on Environment and Development, Principle 15, A/CONF.151/26 (Vol. I) (1992).

43 Zoé Bescond—Michel et al, *Harms of Introduced Large Herbivores Outweigh Benefits to Native Biodiversity*, 16 Nature Communications 1, 1 (2025).

direct interaction with native ecosystems. While this mitigates ecological risks, confinement remains resource-intensive and is not absolutely foolproof. Confinement necessitates ongoing investments in feeding, housing, and genetic monitoring, with such expenditures diverting valuable resources from efforts aimed at protecting extant threatened species.[44]

This diversion weakens ongoing conservation initiatives focused on living species, potentially undermining their survival prospects. Furthermore, no containment system used in confinement strategies guarantees absolute security. Accidental escapes of confined organisms can occur, and these escaped organisms may pose ecological threats, particularly if they are well-adapted to survive in altered environments.[45] Lastly, confinement fails to restore any ecological complexity or functionality. It also raises concerns regarding animal welfare, as the drawbacks of such ex-situ preservation are well documented.[46] Such animals often face the risks of inbreeding, loss of genetic diversity and the risks of weakened survival skills upon the eventual rewilding.[47]

Most importantly, confinement essentially counters purported justifications of "conservation" and "restoration of biodiversity", as these organisms would not be released into the wild. Thus, confinement is counterintuitive and purpose-defeating, rendering de-extinction projects a scientific innovation and not a genuine attempt towards conservation.

Environmental Unsustainability of Both Models

The precautionary principle necessitates cautious action amidst ecological uncertainty.[48] De-extinction projects, whether through rewilding or confinement, face significant challenges in safeguarding biodiversity. Rewilding risks ecosystem destabilisation through invasiveness, disease introduction, and novel ecological disruptions, while confinement requires intensive resources, risks accidental escapes, and compromises animal health and welfare.[49] Moreover, confinement diverts critical resources from current endangered species conservation and raises ethical concerns related to animal welfare and genetic health.[50] Neither approach presently fulfils the stringent requirements to effectively conserve biodiversity.

Conclusion

De-extinction has presented a unique conundrum, with uncertainty in definition and plausibility of environmental harm. Tech-

44 Restani & Marzluff, *supra* note 8, at 175.

45 American Committee of Medical Entomology & American Society of Tropical Medicine and Hygiene, *Arthropod Containment Guidelines, Version 3.2*, 19(3) Vector-Borne and Zoonotic Diseases 152, 152 (2018).

46 Mohammed Kasso, Mundanthra Balakrishnan, Ex Situ Conservation of Biodiversity with Particular Emphasis to Ethiopia 7 (Hindawi Publishing Corporation 2013).

47 *Id.*

48 *Supra* note 48.

49 Alexandre Robert et al., *supra* note 41, at 1023; Douglas J. McCauley et al., *supra* note 42, at 1009; International Union for Conservation of Species, *supra* note 43, at 4.

50 Restani & Marzluff, *supra* note 8, at 175; American Committee of Medical Entomology & American Society of Tropical Medicine and Hygiene, *supra* note 51, at 152; Kasso & Balakrishnan, *supra* note 52, at 152.

nology has typically outpaced regulation, but the perils of ecological harm are immense in the context of de-extinction projects. This necessitates measures to regulate such activities, both in the contexts of domestic legislation and the international domain. While the articulation of policy reforms is beyond the scope of this research paper, as its objectives are neither prescriptive nor remedial, it is nonetheless a fertile ground for future research.

Colossal Biospheres has raised a total of $435 million in funding to date, highlighting the commercial viability of such projects.[51] The next meeting of the Conference of the Parties to the CBD is scheduled in October 2026 in Yerevan, the mountainous capital of Armenia.[52] It would be worthwhile to include de-extinction frameworks as a part of the agenda, with de-extinction projects worldwide[53] likely being bolstered by the success of the dire wolf resurrection endeavour. It is essential to articulate and put forth a series of guiding principles to mitigate the impact of such projects and ensure humane treatment throughout. The State parties and the biotechnology sector both owe duties to the ecosystem and people, but especially to flora and fauna. Pandering to scientific curiosity cannot come at the cost of threatening existing components of biodiversity.

51 Bloomberg News, *Colossal Biosciences Raises $200 Million to Bring Back the Woolly Mammoth*, (Jan. 15, 2025), https://www.bloomberg.com/news/articles/2025-01-15/colossal-biosciences-raises-200-million-to-bring-back-the-woolly-mammoth.

52 Convention on Biological Diversity, *COP-17: Seventeenth meeting of the Conference of the Parties*, https://www.cbd.int/meetings/COP-17.

53 Ben Novak, *De-extinction*, 9(11) Genes 1, 1-33 (2018).

Works Cited

Azevedo, Alexandre, and Manuel Magalhães-Sant'Ana. "Reviving the Dire Wolf? A Case Study in Welfare Ethics, Legal Gaps, and Ontological Ambiguity." Animals 15, no. 13 (2025): 1. https://www.mdpi.com/2076-2615/15/13/1839

Beier, Jessie L. "No Going Back: Un-Fixing the Future of De-Extinction." Animal Studies Journal (2023): 163–184. https://www.uowoajournals.org/asj/article/id/303/

Bescond-Michel, Zoé, et al. "Harms of Introduced Large Herbivores Outweigh Benefits to Native Biodiversity." Nature Communications 16 (2025): 1. https://www.nature.com/articles/s41467-025-63807-2

Bloomberg News. "Colossal Biosciences Raises $200 Million to Bring Back the Woolly Mammoth." January 15, 2025. https://www.bloomberg.com/news/articles/2025-01-15/colossal-biosciences-raises-200-million-to-bring-back-the-woolly-mammoth.

BlueSci. "UN Decade on Biodiversity Ends with Failure to Achieve All Conservation Targets." October 3, 2020. https://www.bluesci.co.uk/posts/un-decade-on-biodiversity-ends-with-failure.

Cartagena Protocol on Biosafety to the Convention on Biological Diversity. January 29, 2000. 2226 U.N.T.S. 208.

Chang, Cynthia N., and Benjamin L. Turner. "Ecological Succession in a Changing World." Journal of Ecology (2019): 503.

Colossal. "The Process: Dire Wolf – Science." Accessed September 15, 2025. https://colossal.com/direwolf/science/.

Convention on Biological Diversity. June 5, 1992. 1760 U.N.T.S. 79.

Convention on Biological Diversity. "COP-17: Seventeenth Meeting of the Conference of the Parties." https://www.cbd.int/meetings/COP-17.

Dugal, Manleen. "Will the 2030s Be the Decade for Global Biodiversity Conservation?" May 31, 2023. https://earth.org/global-biodiversity-conservation/.

Ilic, Dusko. "Engineered Proxies and the Illusion of De-Extinction." Stem Cell Reports 20, no. 6 (n.d.): 1–3. https://www.sciencedirect.com/science/article/pii/S2213671125001092

Intergovernmental Committee for the Cartagena Protocol on Biosafety. Report of the Intergovernmental Committee for the Cartagena Protocol on Biosafety on the Work of Its First Meeting. U.N. Doc. UNEP/CBD/ICCP/1/2 (March 27, 2000).

International Union for Conservation of Nature. Guidelines for Reintroductions and Other Conservation Translocations. 2016.

International Union for Conservation of Nature. IUCN SSC Guiding Principles on Creating Proxies of Extinct Species for Conservation Benefit. 2016.

Kasso, Mohammed, and Mundanthra Balakrishnan. Ex Situ Conservation of Biodiversity with Particular Emphasis to Ethiopia. Hindawi Publishing Corporation, 2013.

Kluger, Jeffrey. "The Science Behind the Return of the Dire Wolf." April 7, 2025. https://time.com/7275439/science-behind-dire-wolf-return/.

Kunming–Montreal Global Biodiversity Framework. Decision 15/4, U.N. Doc. CBD/COP/DEC/15/4 (December 19, 2022).

McCauley, Douglas J., et al. "A Mammoth Undertaking: Harnessing Insight from Functional Ecology to Shape De-Extinction Priority-Setting." Functional Ecology 31 (2017): 1006.

Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity. October 29, 2010. 3109 U.N.T.S. 3.

Novak, Ben. "De-Extinction." Genes 9, no. 11 (2018): 1–33. https://www.mdpi.com/2073-4425/9/11/548

Okuno, Erin. "Frankenstein's Mammoth: Anticipating the Global Legal Framework for De-Extinction." Ecology Law Quarterly 43 (2016): 581–633. https://www.ecologylawquarterly.org/wp-content/uploads/archive/2020/03/Frankensteins-Mammoth-Anticipating-the-Global-Legal-Framework-For-De-Extinction.pdf

Ratajczak, Zak, et al. "Abrupt Change in Ecological Systems: Inference and Diagnosis." Trends in Ecology & Evolution 33, no. 7 (2018): 513. https://www.sciencedirect.com/science/article/abs/pii/S0169534718300910

Report of the United Nations Conference on Environment and Development. Principle 15. A/CONF.151/26 (Vol. I) (1992).

Restani, Marco, and John M. Marzluff. "Funding Extinction? Biological Needs and Political Realities in the Allocation of Resources to Endangered Species Recovery." BioScience 52, no. 2 (2002): 169. https://academic.oup.com/bioscience/article-abstract/52/2/169/341429?redirectedFrom=fulltext

Robert, Alexandre, et al. "De-Extinction and Evolution." Functional Ecology 31 (2017): 1021. https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2435.12723

Seddon, Philip J., and Mike King. "Creating Proxies of Extinct Species: The Bioethics of De-Extinction." Emerging Topics in Life Sciences 3, no. 6 (2019): 731–735. https://portlandpress.com/emergtoplifesci/article/3/6/731/220701/Creating-proxies-of-extinct-species-the-bioethics

Selbach, Christian, et al. "Parasites Lost: Neglecting a Crucial Element in De-Ex-

tinction." Trends in Parasitology 34 (2018): 9–11. https://pubmed.ncbi.nlm.nih.gov/28870497/

Sesay, Fatmata, et al. "Invasive Species and Biodiversity: Mechanisms, Impacts, and Strategic Management for Ecological Preservation." Asian Journal on Environment & Ecology 23, no. 9 (2024): 82. https://journalajee.com/index.php/AJEE/article/view/600

Srikar, Rishabh. "Can Species De-Extinction Actually Restore Nature?" Think Wildlife Foundation. August 9, 2023. https://thinkwildlifefoundation.com/can-species-de-extinction-actually-restore-nature/.

Vienna Convention on the Law of Treaties. May 23, 1969. 1155 U.N.T.S. 331.

World Wildlife Fund. "World Fails to Meet Decade-Long Biodiversity Targets as Unequivocal Loss of Biodiversity Reported." September 15, 2020. https://www.wwf.mg/?850241/World-fails-to-meet-decade-long-biodiversity-targets-as-unequivocal--loss-of-biodiversity-reported.

Daniel Ashe

Using Soft Power: Japan and South Korea as Models for Underdeveloped Countries

Can economically underdeveloped countries realistically and strategically follow Japan and South Korea's use of soft power to avoid exploitation, grow influence, and build their economy through cultural industries like Japan's anime and Korea's K-pop? The answer is yes, as Japan and South Korea have shown that soft power, when intentionally planned and built, is a national development strategy that can turn a country's vulnerability into power. Underdeveloped countries should follow these examples because reliance on the exports of natural resources or foreign aid leads to dependency and economic abuse, while investing in a nation's creativity and culture can create independent revenue, a favorable global status, and a way to avoid exploitation.

Japan's historical direction shows how culture can be used to build a reputation abroad post-war and economic devastation. The Constitution of Japan gave the country a pacifist, democratic structure (Articles 9, 13, and 21), enhancing the appeal of Japanese cultural exports (Prime Minister of Japan and His Cabinet, n.d.). This gave Japan's later "Cool Japan" policies validity and capitalized on anime, drama, and fashion to brand the country as modern and peaceful. As Nye (1990) stated, soft power is based on a country's culture, values, and foreign policy. So, Japan's constitution enabled its cultural diplomacy to appear trustworthy rather than propagandistic.

South Korea's experience shows how intentional planning can turn a culture into a global influence. The "Korean Wave" (Hallyu)

combined Korean traditions like hanbok, kimchi, and Confucian values with modern exports such as K-pop, movies, and esports. Both the government and Korean companies supported these initiatives as part of a strategy for socio-cultural growth (Valieva, 2018). This made South Korea a diplomatic entertainment brand, helping it build relations with foreign countries and create soft protections against stronger powers. Hallyu was able to thrive and expand due to infrastructures like IP protection, cultural funds, and digital networks.

However, Japan's experience also shows potential downsides to this approach to diplomacy. Iwabuchi (2015) talks about "pop-culture diplomacy" as a one-way projection that has a risk of homogenizing a nation's identity and ignoring internal diversity. For underdeveloped countries, this demonstrates how important it is to build a two-way cultural exchange. Through things like co-productions, regional festivals, or scholarship programs, these countries can establish the credibility of their cultural influence instead of being dismissed as superficial branding. By promoting exchange instead of cultural projection, underdeveloped countries can strengthen the authenticity of their cultural diplomacy.



Globally, hard power is expensive and often unevenly distributed. Underdeveloped nations can decrease their vulnerability to this by making their cultures valuable. Nye (1990) says that modern power is less about coercion and more about influencing preferences. If underdeveloped countries follow Japan and South Korea's methods, they can use creative industries built on culture and trust as a way to modernize, avoid being exploited, and gain respect as equals.

"THROUGH THINGS LIKE CO-PRODUCTIONS, REGIONAL FESTIVALS, OR SCHOLARSHIP PROGRAMS, THESE COUNTRIES CAN ESTABLISH THE CREDIBILITY OF THEIR CULTURAL INFLUENCE..."

The possibilities for underdeveloped countries cannot be separated from the historical structures that created their dependency. Walter Rodney (2018) shows that underdevelopment is not a natural state but the result of exploitative international relationships that systematically hinder progress. Colonized societies lost the use of their own resources and labor as "the export of surplus ensued, depriving the societies of the benefit of their natural resources and labor" (Rodney, 2018). Kwame Nkrumah makes the same point in his study of neocolonialism, stressing that Africa's reserves of iron, coal, petroleum, and fertile land have long been diverted for "the greater development of overseas interests" rather than local growth (Nkrumah, 1965).

This dynamic continues today. Hickel et al. (2024) calculate that in 2021 the global North appropriated about 826 billion hours of labor from the global South. Valued at Northern wages, this equals €16.9 trillion, effectively doubling labor for Northern economies while stripping the South of productive capacity. Southern workers provide 90% of the labor that powers the global economy but receive only 21% of its income, with wages 87–95% lower than their Northern counterparts even at equal skill levels (Hickel et al., 2024).

According to Rodney, development is "an increasing capacity to regulate both internal and external relationships" (2018). Colo-

nial relationships stripped African societies of that ability, putting decisions about trade, production, and identity in the hands of foreign entities. Soft power is based on cultural production and can act as a potential fix because it gives these countries a way to regain their control over international relations in ways that weren't previously possible through natural resources. Unlike ore or crops, exporting culture like music, film, fashion, and language is based on local creativity and can be managed by institutions within that country. This follows Rodney's definition of development as regaining the ability of self-directed regulation (Rodney, 2018). Nkrumah argued that just "adding more extraction" won't solve dependency (1965). Hickel et al. show the modern version of this as the Global North takes about 11 hours of labor from the South for every 1 hour it gives back. Taken together, Rodney's historical framing, Nkrumah's analysis of neocolonial extraction, and Hickel's contemporary data show how the South remains structured to export wealth rather than develop it.

To make sure that this works, Japan's experience should be used as an example. Johnson (1982) explains that Japan overcame postwar devastation by building a strong industrial policy structure led by the Ministry of International Trade and Industry (MITI). MITI strategically selected sectors to support, controlled foreign trade and technology imports, gave finance and tax relief, and organized competition through supervised cartels and bank-centered conglomerates. Emergency "special procurements" from the Korean War were funneled into upgrading core industries, while policy banks like the Japan Development Bank provided "last resort" loans, and foreign exchange controls ensured scarce dollars were spent on technologies that fit Japan's long-term growth plan. This system acted as an institutional defense against the resource curse described by Nkrumah, capturing profits and spreading risks so industries could move into more advanced, higher-value production. The same tools can guide cultural and creative sectors today through copyright laws, IP monetization, export credits, co-production agreements, and local distribution platforms can turn culture into a sustainable economic strategy. In other terms, ore rents can be replaced with IP rents, and raw extraction with brand, story, and design. The lesson is not to copy Japan's exact industries but its system of state-led support by picking strategic sectors, funding them, protecting them temporarily, and helping them succeed globally while keeping profits inside the country (Johnson, 1982).

When less developed societies interact with those of higher development, it is stated that "the weaker of the two societies… is bound to be adversely affected—and the bigger the gap…the more detrimental are the consequences" (Rodney, 2018). Rodney explains that colonial economies were established to have an export of surplus wealth without reinvestment, while Nkrumah talks about how workers' wages often went outward through imported goods controlled by foreign companies (Nkrumah, 1965). Hickel et al. (2024) supported the modern level of this imbalance, as the net-appropriated labor now makes up ~46% of Northern labor consumption, meaning Northern living standards depend greatly on Southern labor, which all together shows how trade, aid, and neocolonialism increased the gap between North and South.

Japan's MITI shows how government planning can fix this by turning global demand into domestic investment and aligning finance, technology, and competition policy with national goals (Johnson, 1982). For underdeveloped countries, this displays how state-led structures, rather than resource extraction, create resilience and allow societies to resume development on their own terms. Based on Nye's definition of soft power, when coercion is too expensive and can affect a country's reputation, the states that succeed are ones that can create a massive level of attraction and turn it into economic and diplomatic power. East Asia's cultural industries are proof of this method's effectiveness, seen through South Korea's K-pop diplomacy. Emerging creative-economy coalitions in Africa and Latin America show the model's adaptability for South–South development and influence.

Culture should be treated as infrastructure. South Korea's media reforms after 1987 led to a thriving drama industry that was connected to strong IP protection, finance, and export support so that with cultural successes it could be monetized abroad. This policy turned audience enthusiasm into steady revenue and a strong reputation, which is the "conversion mechanism" that's essential for turning soft-power resources into influence (Nye, 1990).

A second strategy is the use of nongovernment groups or individuals as public diplomats. South Korea uses famous K-pop groups at big events: EXO at the Olympics, Red Velvet performing in North Korea, and BTS speaking at the UN. This demonstrates how celebrity influence can reach people that normal politics and diplomacy can't (Shafie, 2024). The government's role is not to control every message that spreads but to set up moments where these figures connect with their nation's narrative and let the global media do the rest.

The third strategy is to align this with legal and regulatory structures. The "BTS law," for example, permitted brief postponement of military service for cultural artists. This was a strategic move to protect a scarce reputational asset and boost tourism, language study, merchandise, and platform deals (Shafie, 2024). When it's expensive for countries to influence others through force, it's ideal for them to focus their resources on strengthening the things that naturally attract others, like culture, values, or reputation (Nye, 1990).

A fourth strategy, as highlighted by Beng Huat, emphasizes reciprocity and localization. Exporters cannot fully control their audience interpretation; attraction is based on how their products are received, which are also filtered by intermediaries, regulation, and history (Huat, 2012). This means that they should try different forms of collaboration on things like content, platform partnerships, and tailoring material for different groups to make sure content is shared as a two-way exchange. For example, the problem with failures like China's criticism of Japan's International Manga Award wasn't pop culture itself, but the lack of mutual exchange and humility (Huat, 2012).

East Asia shows that the creative economy where culture, technology, and business intersect, can give developing countries a stable way to grow. Both direct returns, such as exports and employment, and indirect effects, including innovation overflows and

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human capital development, strengthen a nation's power of attraction (M'Hammdi et al., 2023). UNCTAD argues that creative based goods and services help inclusive development by generating income and exports while supporting both social inclusion and cultural diversity, shifting the focus from just measuring economic growth (GDP) to looking at overall human well-being. (M'Hammdi et al., 2023).

For Africa and Latin America this is relevant in two ways. Firstly, the fast growth in creative services like game design and audiovisual production reflects an interest in industries with minimal raw-material dependence and high labor intensity. These areas give the economy diversity, create jobs for youth, and build brands that circulate through diasporas and platforms. Secondly, it is easier for countries in the Global South to work together due to their shared heritage, seen best with elements of Latin American culture originating from the African continent (M'Hammdi et al., 2023).

Creative industries succeed when public policy provides "permission to experiment," supports initial projects, and trains a new creative generation (M'Hammdi et al., 2023). As more people lead digital and IP literacy, casual creators start turning their skills into careers, businesses become more organized, and local creative scenes grow into recognized industry hubs. Those places make cre-



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ative work that spreads like festivals, streaming shows, small fashion labels, and local game studios. Each achievement rebrands the country as a site of creativity and taste, changing the way investors view it as well as diplomatic conversations. This shows Nye's idea of agenda-setting power, where people begin to see partnership as good because that country's culture is already part of their everyday lives (Nye, 1990).

There are challenges to this, but they can be fixed. Many African cultural and creative industries still rely on small and informal firms with weak funding, weak worker protection, and poor enforcement of intellectual property rights. Latin America has trouble making the most of its creative industries and connecting its creative centers with national systems for innovation (M'Hammdi et al., 2023). We can once again turn to East Asia for solu-

tions: structures that make sure jobs are fair and protect workers' rights, special loans and export insurance, IP modernization, urban development strategies, and government-supported financing for early-stage industries. As these measures establish a foundation, soft-power benefits will appear: branding, cultural festivals, diaspora support, and international student exchanges that make it more difficult and expensive for other states to marginalize or pressure the exporting nation.

It can be reasonably argued that entertainment is commerce and not power. Yet in a globalized world, the boundaries that separate the two don't exist. Money from production pays for making more content, sharing it, and training people. That content then fills global platforms, which influence what people like and expect. In turn, those public tastes and expectations limit what officials can do. Money enables attention, and attention shapes outcomes, which is Nye's chain from resources to influence (Nye, 1990). Others warn of homogenization or nationalist backlash. That risk is real, which is why reciprocity, shared ownership, local writers' rooms, skills exchanges, and fair royalty systems are important. As Iwabuchi has cautioned, soft power loses credibility if it becomes a one-way projection; reciprocity and authenticity protect against that risk, strengthening legitimacy and attraction (Huat, 2012; Iwabuchi, 2015).

Some countries may not be able to compete with money or military strength, but they can still use their creativity and culture. To do this, they should treat culture as an important infrastructure, use trusted voices outside the government to share their message, send clear and well-timed messages, make laws that protect creative work and intellectual property, invest in education and innovation, and build networks with other countries in the Global South that turn both shared and different traditions into opportunities. East Asia shows how this works in practice, Africa and Latin America show in what areas it could be used, and Nye explains why it is useful in systems that depend on legitimacy (Nye, 1990; Huat, 2012; M'Hammdi et al., 2023; Shafie, 2024).

The important question is not the existence of attraction, but whether it can be deliberately used to reduce vulnerability and expand influence. Postwar Japan made pacifism a part of the constitution alongside popular sovereignty and civil freedoms. Article 9 rejects war; Articles 13 and 21 protect dignity and expression; and the preamble ties national purpose to "peaceful cooperation with all nations," declaring government a "sacred trust of the people" (Prime Minister of Japan and His Cabinet, n.d.). These were used to reduce fears of aggression and enhance trust in cultural diplomacy, turning away from a dependency on hard power.

When trade issues and historical grievances limited Japan's ability to maneuver in Asia, officials turned to cultural diplomacy like language programs, student exchanges, and exporting media. Oshin's popularity in the 1980s showed that authentic stories could cross borders and ease tensions better than official policy papers. (Iwabuchi, 2015).

The 2000s then made Cool Japan part of official policy, using media and lifestyle industries as strategic tools. Yet Iwabuchi points out a consistent problem: one-way national branding, show-

ing off an image without real two-way exchange, and at home, Japan sometimes sent mixed signals that weakened its message abroad (Iwabuchi, 2015). The remedy isn't giving up but changing direction so the means of soft power align with the very values it promotes, returning to Nye's credibility condition (Nye, 1990).

There is also culinary diplomacy which brings national culture into everyday life. When Japanese cuisine (washoku) was added to UNESCO's Intangible Cultural Heritage list in 2013, it gave Japan global recognition by connecting food traditions, seasonal awareness, and healthy eating to national identity while supporting Cool Japan's export strategy (Anargirou, 2025). The government used chefs, food festivals, and education through MAFF and embassies to promote trade and build good international relations with cuisine. From 2013 to 2019, the number of Japanese restaurants overseas went up by about 30%. During the same time, Japan's food exports jumped from $6.1 billion to $10.1 billion—a rise of about 65%. This boosted worldwide demand for foods like miso, soy sauce, and sake (Anargirou, 2025). Food tourism became a big attraction. Almost 30% of international travelers said food was a main reason for their visit. Special events like Japan Week in New York or European Washoku Week helped boost interest in restaurants and encouraged people to travel to those regions (Anargirou, 2025).

Japan used the Tokyo Olympics to promote "Sustainable Washoku," linking its food culture to health and environmental care. TV and social media promoted the message, and afterward Japanese food exports increased (Anargirou, 2025). In Nye's terms, Japan used food to shape how people saw it as creative, caring, and eco-friendly, which made others more open to its goals (Nye, 1990).

Japan built a strong system to promote its language through both policies and institutions. The Agency for Cultural Affairs sets policy, the Japan Foundation manages international exchange and language teaching, and private associations handle specialized support. Together, they raise the prestige of Japanese culture while also building practical resources like teachers, curricula, and exams (Gu & Deng, 2024). The Sakura Network creates local hubs that train teachers and stabilize faculty pipelines; the JF Japanese Language Education Standards, which are based on the CEFR system, give learners a clear way to measure and compare their skills. The JLPT, offered in many countries, is used as a test that shows employers and students someone's level of Japanese ability (Gu & Deng, 2024).

Japan also uses soft power through teaching the language, creating a community of learners. These communities increase and normalize Japanese media consumption, study abroad, and do business with Japan. Over time, these habits lead people to favor Japanese ideas and partnerships (Gu & Deng, 2024).

Important options for developing nations are to create laws or constitutional protections that guarantee free expression and respect for minority cultures to show both the world and local artists that the government won't use art and culture as just a political tool. The next step is to create systems that help ideas turn into real products and services. Such options include enforceable IP protections, financial support for those working in such services, and training

for skills such as animation, cooking, language, and music. This should eventually lead to creative hubs that bring together studios and festivals and allow tourism. Johnson's insight is relevant in this case: align finance and standards with strategic sectors, then grade success by world-market performance (Johnson, 1982). Third is to combine traditional culinary and language aspects with global media. Food festivals, chef exchanges, and food protections should be paired with language programs, language assessments, and streaming shows so that every point of contact—a dish, a drama, a diploma—builds upon one another (Anargirou, 2025; Gu & Deng, 2024). Finally, manage reciprocity and coherence: focus on co-productions and exchanges. In foreign policy, practice restraint, be open and transparent, and keep dialogue going. Soft power works best when everything is consistent, and it weakens when there are contradictions. (Nye, 1990; Iwabuchi, 2015).

South Korea shows that soft power is an essential alternative because it turns cultural attraction into a measurable economic and diplomatic influence at a way lower cost than gaining hard power. Soft power can act as a realistic national development strategy that underdeveloped countries can realistically use, and it does so through repeatable systems. The first objection is that Hallyu doesn't make much direct money. Parc (2022) explains that in 2013, Korea was only ranked 14th in UNESCO's list of countries exporting cultural goods. Even now, if you don't count video games, Korea's cultural exports are still small compared to its semiconductor exports. But, Parc also shows that cultural goods bring disproportionate returns because they increase national reputation, strengthen its image for making quality goods, and help attract tourists. Tourism revenue even doubled in the ten years before the pandemic.

Rose's study shows in numbers how a country's image affects its trade. Using a model that shows changes over time, he found that if people in one country see another country more positively, then that country's exports go up by about 0.5% for every 1% rise in positive perception. On the other hand, if the perception gets worse, exports drop by about 0.28%. Overall, the positive effect is stronger, and the results are consistent even after multiple checks (Rose, 2015). Rose's idea is that "winning hearts and minds also wins sales." This is important for underdeveloped countries because it establishes a direct financial payoff to attraction even when cultural exports themselves are small. If the foreign public likes you, they'll buy more from you overall.

Critics argue that government involvement can lead to the risk of politicizing culture, affecting its authenticity. Korea shows otherwise. Minsung (2023) shows how ministries moved from treating culture as simply a money-making export to making it part of national branding. The government provided funding and built networks but didn't control the creative content itself. Parc (2022) notes that after 2013, new social media platforms, streaming services, and smartphones greatly expanded global reach right when exports of TV shows and other media began to grow quickly.

Another possible objection would be that soft power cannot be used as a substitute for hard power. That is both true and irrelevant to its usefulness in avoiding exploitation. South Korea is still a middle-rank power in a tough region. Its leaders are aware

that music and drama can't stop missiles. By gaining admiration abroad, Korea expanded its ability to act in foreign policy at a low cost. Rose (2015) found that countries with a good reputation sell more products abroad, even when you consider factors like distance, shared language, trade deals, or colonial history. Extra sales, increased tourism, and new partnerships bring in more money and stronger alliances. Over time, these resources help finance selective hard-power upgrades and can help replace and prevent the economic losses of natural resource exploitation. Soft power is not a shield against hard power but an escalator, an influence that rises through negotiation rather than coercion.

Underdeveloped countries that want to escape this dependency trap should follow these four steps: industrialize culture; export insurance, IP courts, training, and diplomatic distribution networks (Minsung, 2023); prioritize digital platforms before expensive studios (Parc, 2022); protect and monetize IP; and base attraction in reciprocity by designing grants and co-productions that require two-way exchange to avoid propaganda and build trust (Huat, 2012). South Korea's case also shows that culture doesn't directly add much to the GDP. Parc (2022) points out that cultural exports, without games, would not reach Korea's top export ranking. That does not mean that soft power is weak or ineffective but instead shows that it operates differently. Culture shapes long-term preferences toward a country's people, products, and policies.

Soft power also gives underdeveloped countries a way to build the foundation for eventual hard power. While Nye's (1990) definition is different from using force, Hagström (n.d.) emphasizes that soft power frequently comes before and legitimizes hard power. Hagström (n.d.) highlights that soft power is not "innocent" but builds the legitimacy a country needs for the use of hard power. South Korea's Hallyu, for example, produced billions in exports, which could be reinvested into the technological and military upgrades (Shafie, 2024). Japan's "Cool Japan" initiative similarly helped normalize the use of a stronger Self-Defense Force by establishing international trust.

K-pop diplomacy has also established a global fan base that associates South Korea with positive values (Shafie, 2024). These fans act as informal lobbies abroad, making it easier to establish security partnerships. Hagström (n.d.) also notes that soft power often tells a widespread story of a "good us" against a "dangerous them," which can make military moves seem necessary. Hagström (n.d.) also points out that China also uses the idea of "harmony" to support its domestic authority. For emerging countries, cultural soft power can build national pride, reduce internal division, and create the stability needed for long-term defense modernization.

West Africa, for example, can use soft power by using the creative economy to establish a formal export policy. UNCTAD defines the creative economy as the mixture of culture, economics, and technology that generates income, jobs, and exports while supporting both inclusion and human development. This means governments can reasonably make intellectual property, financing, and skills training part of national development instead of treating them as optional arts funding (UNCTAD, 2008). This would involve creating regional IP registries with ECOWAS-wide enforcement and

establishing a blended Creative Export Fund to co-finance films, music, fashion, and games, international earnings, and local hiring. These tools shift power by creating recurring royalties and digital leverage that cannot be stripped like raw resources (Rodney, 2018).

Power responds to numbers, so governments should create a public "soft-power ledger" that shows how culture influences the economy, like copyright earnings, platform rankings, co-production deals, international festival selections, and tourism connected to cultural events. Making this progress visible forces coordination across ministries and strengthens negotiating positions with global streamers, labels, and event promoters that currently undervalue West African content. History shows that when Europeans built trade in Africa, industries like shipping, insurance, and manufacturing developed around it. A modern creative ledger could do the same today, causing industries such as touring services, event insurance, digital payments, and equipment production to grow inside West Africa instead of abroad (Rodney, 2018).

Independence is also an important aspect. When one side controls the story, it keeps others economically dependent. Today, that control often comes through debt, global platforms, scholarships, and information power (Nkrumah, 1965; Amtenbrink, 2024). To stop this, West Africa should set up its own international media system. This can be done through a global news channel with offices in major cities, a regional streaming platform for movies and shows, and a news service that shares the ECOWAS perspective with audiences outside the West. De-Americanized soft-power scholarship shows how Global South broadcasters pushed back against Western stories about conflicts. West Africa needs a similar institution to challenge negative portrayals that negatively impact investments and tourism while also normalizing African policy leadership (Oluwaseun, 2021).

Another essential area is education and talent development. Creative exports require skill and collaboration, but a lack of knowledge in digital literacy and rights can make negotiation more difficult. Mandating arts-and-tech integration in curricula, funding public labs for game design and digital effects, and accrediting industry-run apprenticeships would strengthen capacity. When governments fund experimental creative projects, it attracts private investors and helps small businesses survive longer. (M'Hammdi et al., 2023). Because West Africa has so many young people, investing in creative industries also helps with jobs. These industries spill over into areas like tourism, manufacturing, and software, giving graduates more chances to find work in connected areas (M'Hammdi et al., 2023).

Another strategy is to advertise cultural values. Creative products only lead to influence when they show political values that others can relate to and trust (Nye, 1990). Making a Creative Workers' Bill of Rights, proper transparency with the use of cultural funds, and reliable artist protections would help with this. Ideas like Ubuntu, Omolúwabi, and Harambee express community values that people globally can relate to (Oluwaseun, 2021). If a country protects the rights of its creators and artists, it avoids scandals that could damage its reputation and block cultural deals or visas. Soft power weakens when a nation's actions at home don't match the positive

image it tries to promote abroad.

Working together across regions supports these strategies. Africa and Latin America can use their shared cultural history and creative industry growth for joint festivals, sharing tax breaks, and co-production treaties would combine audiences and bargaining power. As a result, streaming platforms and distributors have to offer better baseline payments. Media partnerships between nations in the Global South create new ways to share content without relying on legacy gatekeepers, just like how other Global South outlets shifted news agendas (Oluwaseun, 2021).

Policy should also prepare for modern forms of neocolonialism. These include loans for infrastructure that trap countries in debt, foreign-backed militias that protect resource deals, and currency systems that limit governments' ability to make independent economic decisions (Amtenbrink, 2024). Protective measures against this include standard digital-trade clauses in platform and cloud contracts that relate to data localization, audit rights, and fair pay; special clauses in trade deals that protect cultural quotas and subsidies; agreements that trade debt relief for investments in cultural infrastructure; and creative-sector insurance programs that help small creative businesses if they lack collateral. These measures target the specific ways in which influence is currently used, using soft power to expand outside options rather than leaning only on the sale of raw materials (Nkrumah, 1965; Amtenbrink, 2024).

Regional organizations need to set up clear, professional ways to manage and protect creative rights. They should set up a shared database across partnering countries to track creative works, make sure royalties are automatically sent to artists' mobile wallets, and require venues and broadcasters to report what they play as part of their license. Without accurate metadata, streaming payouts slip away to other countries. If it is done properly, however, musicians and small businesses can prove their earnings, get fair payouts, and use that income to qualify for loans.

Culturalism shows how art or media with strong values can influence people in other areas, because audiences connect with works that relate to current issues or shared goals. It is historically shown that a set of important works can spread human rights ideas across the world, not by copying pop culture, but by addressing universal problems that different societies can relate to in their own way (Huq, 2019). West African theatre, literature, and film already address gender equity, governance, environment, and migration issues that can create durable connections. Programming funds and translation support should prioritize these kinds of works because they create lasting respect and recognition, even when popular platforms change (Huq, 2019; Oluwaseun, 2021).

Some argue that creative industries are too small yet their impact on areas like tourism, hotels, shipping, payments, and manufacturing is actually way bigger than the money they directly bring in (M'Hammdi et al., 2023). Others may also be concerned about the reliance on global platforms and their potential to create a new form of dependency. This can be reduced through negotiation, transparency agreements, shared/public platforms, and the diversification of exports across different outlets like festivals, television, and diaspora markets (Oluwaseun, 2021)

European countries grew rich by taking Africa's resources, and they kept that advantage by controlling the continent's shipping, insurance, and finance (Rodney, 2018). Today, power comes from things like intellectual property, digital platforms, and storytelling. Soft power alters price, accessibility, and how risky deals impact which side has an upper hand (Nye, 1990). Building strong cultural industries that are well-measured, well-funded, properly taught, authentically presented, and based on trusted values makes West Africa less desperate and increases the minimum standards in negotiations (UNCTAD, 2008; Amtenbrink, 2024; Oluwaseun, 2021; M'Hammdi et al., 2023). Japan's history with soft power shows both benefits and potential risks because after the war, cultural diplomacy improved its image, but initiatives like "Cool Japan" and "Gross National Cool" turned into one-way marketing that wasn't based on genuine exchange. If underdeveloped countries only focus on cultural promotion without strong support systems, they create the risk of staying dependent. But, if they build soft power in a credible way, it can give them stronger negotiating power without turning diplomacy into temporary entertainment (Iwabuchi, 2015).

Overall, the evidence shows that soft power can be used as a powerful additional tool to assist with underdevelopment. It can boost a country's visibility and inspire pride. At the same time, it also comes with risks like one-way projection, suppression of diversity, vulnerability to unresolved history, the influence of global trends, a distraction from domestic priorities, and reinforcement of inequalities. As Iwabuchi (2015) emphasizes, Japan's pop-culture diplomacy often turned into a one-way brand without dialogue. Huq (2019) shows that success also depends on how foreign audiences interpret it, not just what is intended.

"OVERALL, THE EVIDENCE SHOWS THAT SOFT POWER CAN BE USED AS A POWERFUL ADDITIONAL TOOL TO ASSIST WITH UNDERDEVELOPMENT. IT CAN BOOST A COUNTRY'S VISIBILITY AND INSPIRE PRIDE."

Using UNCTAD's development structure for the creative economy, the aforementioned tools explored throughout this piece help countries keep more of their own profits and regain control over how they deal with foreign relations (UNCTAD, 2008). When carefully planned, soft power a useful tool that helps weaker countries protect themselves from being exploited and gives them more leverage in global negotiations.

Works Cited

Alaoui M'Hammdi, Nezha, and Larabi Jaïdi. "The Cultural and Creative Industries in Africa and Latin America." Policy Center for the New South, 2023. https://www.policycenter.ma/publications/cultural-and-creative-industries-africa-and-latin-america.

Amtenbrink, Annika. "Neo-Colonial Dynamics in Africa:A Comparative Study of China, Russia, and France: An Assessment of Economic, Political, Cultural, and Military Engagement as a Form of Neo-Colonialism." Malmö University Publications, June 11, 2024. http://urn.kb.se/resolve?urn=urn%3Anbn%3Ase%3Amau%3Adiva-68370.

Anargyrou, Alexandra. "Soft Power by Design: Japanese Culinary Diplomacy." The Yale Review of International Studies, August 14, 2025. https://yris.yira.org/column/soft-power-by-design-japanese-culinary-diplomacy/.

Beng Huat, Chua. "Pop Culture as Soft Power." Structure, Audience and Soft Power in East Asian Pop Culture, April 20, 2012, 119–44. https://doi.org/10.5790/hongkong/9789888139033.003.0008.

Frykskog, Linus. "Soft Power Enables the Exercise of Hard Power - Försvarshögskolan." Swedish Defense University, December 9, 2019. https://www.fhs.se/en/swedish-defence-university/stories/2019-12-09-soft-power-enables-the-exercise-of-hard-power.html.

Gu, Jingshu, and Shiping Deng. "Rearticulating the Promotion of Japanese Language and Culture from the Perspective of 'Soft Power': Planning and Effects." Frontiers in Psychology 15 (May 30, 2024). https://doi.org/10.3389/fpsyg.2024.1371271.

Hickel, Jason, Morena Hanbury Lemos, and Felix Barbour. "Unequal Exchange of Labour in the World Economy." Nature Communications 15, no. 1 (July 29, 2024). https://doi.org/10.1038/s41467-024-49687-y.

Huq, Sabiha. "Soft-Power, Culturalism and Developing Economies: The Case of Global Ibsen." Palgrave Communications 5, no. 1 (May 14, 2019). https://doi.org/10.1057/s41599-019-0255-4.

Iwabuchi, Koichi. "Pop-Culture Diplomacy in Japan: Soft Power, Nation Branding and the Question of 'International Cultural Exchange.'" International Journal of Cultural Policy 21, no. 4 (June 23, 2015): 419–32. https://doi.org/10.1080/10286632.2015.1042469.

Johnson, Chalmers A. Miti and the Japanese miracle: The growth of industrial policy: 1925-1975. Stanford: Stanford University Press, 2023.

Nkrumah, Kwame. Neo-colonialism: The last stage of imperialism. London: Panaf, 1965.

Nye, Joseph S. "Soft Power." Foreign Policy, no. 80 (1990): 153–71. https://doi.org/10.2307/1148580.

Parc, Jimmyn. "Home." Asialink, 2022. https://asialink.unimelb.edu.au/insights/koreas-cultural-exports-and-soft-power-understanding-the-true-scale-of-this-trend.

Prime Minister of Japan and His Cabinet. "The Constitution of Japan." Accessed September 2, 2025. https://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html

Rodney, Walter. How Europe underdeveloped Africa. London: Verso Books, 2018. Originally published 1972.

Rose, Andrew. Like me, buy me: The effect of soft power on exports, September 2015. https://doi.org/10.3386/w21537.

Shafie, Tara. "K-Pop Idols as Diplomats: South Korean Celebrities and Soft Power." Athens Journal of Politics & International Affair 1, no. 3 (August 26, 2025): 179–202. https://doi.org/10.30958/ajpia.1-3-1.

Tella, Oluwaseun. Africa's soft power, May 23, 2021. https://doi.org/10.4324/9781003176022.

United Nations Conference on Trade and Development (UNCTAD) and UNDP. Creative Economy Report 2008: The Challenge of Assessing the Creative Economy Towards Informed Policy-Making. 2008. https://unctad.org/system/files/official-document/ditc-20082cer_en.pdf

Valieva, Julia. "Cultural Soft Power of Korea." Journal of History Culture and Art Research 7, no. 4 (November 30, 2018): 207. https://doi.org/10.7596/taksad.v7i4.1837.

Jaime Esquenazi

Following the Path of the Railroad: China's Railroad Evolution From Military Imperative to Cultural Tool

Introduction

Under Mao's rule, the Chinese Communist Party's political decision-making was heavily influenced by its unstable political and economic standing. Surrounded by a plethora of adversaries, China was forced to enact a number of shortsighted policies to address these pressing matters. Early railroad placement was almost entirely concerned with national defense, rather than following the natural lines of economic development. Track construction was deeply intertwined with the military, specifically with an army branch called the Army Railroad Corps (*tiedaobing* 铁道兵), that laid the majority of tracks during this era.

Despite these lines being placed to exclusively fulfill military goals, they had major social and political implications. The presence of a railway station in a town or village led to rapid urbanization, as well as increased political consciousness for citizens in the surrounding areas. Rather than China building railroads around urban centers, urban centers cropped up around major railway hubs. Although these benefits were simply byproducts of the CCP's somewhat erratic railroad placement, today's central government perceives these benefits to be their impetus for developing high-speed rail.

It is clear that in today's era, leaders display a heightened level of strategic calculation compared to their predecessors. This can be attributed both to their stronger economic and political positioning, as well as their ability to learn from their past mistakes and triumphs.

Because of the high-speed rail's effect on urbanization, the CCP is not only able to control China's development, but also garner the respect and support of local governments who hope to be rewarded for their loyalty with a brand-new train station. Furthermore, high

speed rail, which allows people and goods to traverse the country exponentially faster than conventional rail, exerts profound effects on local economies, and has only increased the number of localities vying for their own high-speed train station. In addition, by greatly cutting travel time, China is able to support migration, assimilation, and cultural unity. This is particularly important in regions heavily occupied by ethnic minorities, which have historically been more autonomous and less supportive of the central government.

National Defense as a Motivator for the Placement of Early Railroads

The Tiedaobing 铁道兵

From the time the People's Republic was declared in 1949, the government utilized the army to construct its railroads, meaning that from the get-go, railroad development became intertwined with military service and military goals. However, even before 1949, when the CCP was still engaged in civil war, the People's Liberation Army (PLA) recognized the importance of gaining command over the railways.



"FROM THE TIME THE PEOPLE'S REPUBLIC WAS DECLARED IN 1949, THE GOVERNMENT UTILIZED THE ARMY TO CONSTRUCT ITS RAILROADS..."

Army officials understood that for the PLA to transform their mobile guerilla warfare campaign into a sustained and centrally coordinated effort, control of the rail routes was necessary.[1] Adopting this strategy marked the turning point in the Communists' military efforts to defeat the Nationalist armies. For example, in 1948, the PLA seized all rail lines into Shenyang city and Jilin province, making retreat and reinforcements impossible for the Nationalist troops.[2] In another instance, key railroad arteries such as the Jin-Pu and Long-Hai lines became strategic markers for the long campaign that culminated in the capture of Shanghai, Nanjing, and the lower Yangtze region.[3] With triumph over the Nationalists in 1949, the PLA gained an early understanding of the strategic value that railroads held for national defense. As the early state era progressed, the military kept this valuable lesson in mind, never taking control of the railroads off their radar.

After the civil war, the military was naturally the most functional branch of the government, so they gained official control of all decisions related to railway construction. Starting in 1952, the government created the Army Railroad Corps (*tiedaobing* 铁道兵), a subsection of the military that took charge of repairs and construction of new lines.[4] In creating the *tiedaobing*, the govern-

1 Elisabeth Köll, *Railroads and the Transformation of China*, Cambridge, Massachusetts: Harvard University Press, 2019), 226.

2 Ibid.

3 Ibid.

4 Ibid., 241.

ment leveraged the pre-established organization of the military to expedite all railroad building processes. This jump-started the long-standing official relationship between the Chinese military and the creation of national infrastructure projects like railroads, not just the recapturing of them.

The close relationship between the railroads and the military was incredibly beneficial for the Chinese government. For the next several decades, the Chinese government combined centrally directed construction with military presence to build some of the most ambitious railway projects. For instance, the *tiedaobing* built impressively long lines through harsh terrains, such as the Lanzhou-Urumqi line that spanned 1,200 miles of track through the desert.[5] At the same time, this line proved beneficial to the PLA because for the first time they controlled rail links to sensitive border areas in Xinjiang province. Realizing that railroad construction projects could address political hotspots, the Chinese government cemented the bond between railways and the military.

During the civil war, the PLA sought to assert authority over all railways. After the war, the task of building and repairing railroads fell to the PLA. Right from the start, a mutually beneficial arrangement between these two entities emerged. Not just a passing phase, this partnership proved so effective that it became a permanent fixture in future Chinese railroad development, a fact underscored by the location chosen for the country's first new line.

Chengdu-Chongqing Railway

Following the declaration of the modern state in 1949, China's first new railway connected two major southern cities: Chengdu and Chongqing. To the Communist Party, neither city was particularly economically relevant. However, both cities were of great military significance. The decision to establish this route for the nation's first new railroad highlights the early focus on national defense in the development of the CCP's rail network.

Even before the start of the Civil War, Chengdu and Chongqing were widely recognized as crucial military hubs. During World War II, the Nationalists centered their war effort against the Japanese in Chengdu and Chongqing. Sichuan was to be a stepping-stone for Japan's total control of the Chinese mainland. As such, the two biggest cities of the province became prime military targets for Japanese air strikes.[6] As a result, the Nationalists rallied support from local populations, turning Chengdu and Chongqing into hubs for wartime operations.

Beyond their geographic and strategic importance, Chengdu and Chongqing developed an identity centered around resistance. Derived from their victory against Japanese foreign aggression, the two cities came to symbolize a vision of national strength.[7]

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5 Elisabeth Köll, *Railroads and the Transformation of China*, 1st ed. (Cambridge, Massachusetts: Harvard University Press, 2019), 241.

6 Federica Ferlanti, "The New Life Movement at War: Wartime Mobilization and State Control in Chongqing and Chengdu, 1938-1942," *European Journal of East Asian Studies* 11, no. 2 (2012): 190.

7 Joseph W. Esherick, *Remaking the Chinese City : Modernity and Na-*

Chongqing, in particular, embodied this spirit. Even in the face of the thousands of air raids that battered the city from 1939 to 1941, Chongqing continued to persevere, giving it a reputation as indestructible.[8] Additionally, newspaper and journal articles portrayed Chongqing as a site of national rebirth, describing it as "a great furnace in which a new spirit of the people was forged".[9] For the popular imagination, Chongqing's physical perseverance represented the endurance of the Chinese people.

Following the end of World War II, civil war broke out on mainland China. Despite early success in the late 1940s, the Kuomintang (KMT) was forced to retreat inland, relocating its capital to Chongqing. With the fall of Chongqing on November 13, 1949, the weakened national government relocated a final time to Chengdu. This would be the last time the Nationalists were based in mainland China.

Following the KMT's retreat, it became crucial for the Communist party to establish control over Chengdu and Chongqing, both because of what they represented to the KMT, but also to China as a whole. On December 31, 1949, Secretary of the Southwest Bureau Deng Xiaoping proposed the creation of a line between the two cities.[10] Construction began in June of 1950 and was completed just two years later, employing nearly 30,000 People's Liberation Army troops.[11] It was the first railway line built in China after the establishment of the People's Republic.

With their strategic importance both during World War II and the Civil War, coupled with an intrinsic identity symbolizing resistance, it became imperative for the Communist Party to gain control over Chengdu and Chongqing. By building a train line there, the central government accomplished this. The railway cemented the CCP's foothold in a region once held by adversaries, while also providing justification for deploying 30,000 military troops into previously occupied territory. For the newly formed country, a railway linking coastal economic centers may have proved more advantageous. However, the decision to prioritize an area of greater military significance over economic benefits underscores the importance of national defense as a primary motivator shaping early Chinese railroad construction.

Third Front Movement Railroad Building

Over the next decade, railroad construction in China significantly decelerated. Due to great strain on railway transport during the Great Leap Forward Movement, many construction projects were put on pause, such as the Dazhou-Chengdu line.[12] However, it was the onset of the Cold War and the emergence of the Third Front

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tional Identity, 1900-1950, 1st ed. (Honolulu, Hawaii: University of Hawaii Press, 2000), 188.

8 Ibid.

9 Ibid.

10 CCTV. 2009. "新中国档案:成渝铁路--新中国的第一条铁路" August 11. https://news.cctv.com/china/20090811/105574.shtml"

11 Ibid.

12 Claude Comtois, "Transport and Territorial Development in China

"FOR THE NEWLY FORMED COUNTRY, A RAILWAY LINKING COASTAL ECONOMIC CENTERS MAY HAVE PROVED MORE ADVANTAGEOUS. HOWEVER, THE DECISION TO PRIORITIZE AN AREA OF GREATER MILITARY SIGNIFICANCE OVER ECONOMIC BENEFITS UNDERSCORES THE IMPORTANCE OF NATIONAL DEFENSE AS A PRIMARY MOTIVATOR SHAPING EARLY CHINESE RAILROAD CONSTRUCTION."

movement that spurred China to once again prioritize the construction of new railroads as a defensive measure.

In the early 1960s, as Chinese relations broke with the Soviet Union and the United States was engaged in neighboring Vietnam, national defense once again became a key motivator for the placement of railways in China. The leadership at the time knew that China's infrastructure system was weak in comparison to its Cold War rivals. Their primary concern was that if war forced the CCP to relocate its industries from the east, there would be insufficient rails westwards to do so. To make matters worse, once inland, they would still struggle with very limited rail connections in between and within provinces.[13] To compensate for this structural inferiority, the central government called for new industry to be built in China's interior, strategically using the numerous mountains and caves as protective cover.[14] Spanning 13 provinces in the southwest and northwest of China, this vast area came to be recognized as the "Third Front region".[15] This plan would solve their first problem while providing vital pathways for transporting resources to support wartime industries in the central regions of China. With the plan adopted, railroad building during this era would come to support this national defense endeavor.

By the time the Front ended in 1980, the Third Front railways had contributed to important changes in central China's transport infrastructure. In total, the Front added 18,000 miles of track between 1964 and 1980, with over 5,000 miles being added in the western half of China's Third Front region.[16] This represented a sharp increase in the percentage of national rail located in western China, which rose from 19% to 35% during this period.[17] The expansion also required a huge labor force. The total labor force amounted to 5.5 million people, 4.5 million of which came from rural militias.[18] Such massive amounts of labor and financial investments represent how important these inland railways were to the government at the time.

Building railways in the rough and mountainous terrain of inland China instead of along the east coast may seem counterintuitive. Some scholars have suggested that China should have concentrated its limited capital on rail in the country's eastern industrial core. According to Barry Naughton, if China had focused instead on developing coastal railways, the country would have increased

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1949-1985," *Modern Asian Studies* 24, no. 4 (1990): 792.

13 Covell Meyskens, "Third Front Railroads and Industrial Modernity in Late Maoist China" *Twentieth-century China* 40, no. 3 (2015): 243.

14 Ibid., 242.

15 Jingting Fan and Ben Zhou, "Industrialization from scratch: The 'Consturction of Third Front' and local economic development in China's hinterland," *Journal of Development Economics* 152 (2021): 1.

16 Claude Comtois, "Transport and Territorial Development in China 1949-1985," *Modern Asian Studies* 24, no. 4 (1990): 799.

17 Covell Meyskens, "Third Front Railroads and Industrial Modernity in Late Maoist China" *Twentieth-century China* 40, no. 3 (2015): 241.

18 Ibid., 240.

its national GDP during this time period more than it actually did.[19] While Naughton may be right that a coastal-centered industrial strategy would have contributed more to increasing China's GDP, it is important to remember that the CCP did not build the Third Front to boost GDP. The CCP established Third Front railways deep in the interior to ensure the security of the country's industrial assets at all costs. In taking this approach, the CCP appears to have followed a long tradition of railroad development that is informed by the military imperative.

Unforeseen Byproducts from the First Era of Rail Development

Throughout the early era of Chinese rail development, rail placement was tied to the military's agenda. Rather than focusing on long term economic or social goals, the Communist Party exclusively focused on short term benefits supporting national defense. Nevertheless, these rail lines resulted in unforeseen social, economic, and political byproducts that were not wholly expected by the CCP. The byproducts from this first era are two-fold: the rapid urbanization of cities hosting train stations and an enhanced allegiance to Beijing within these same cities. For the CCP, these byproducts were highly advantageous. However, their full impact was dampened by the somewhat random distribution of railroad projects, and the country was unable to fully harness the potential benefits that could have stemmed from a coordinated introduction to rail travel.



"WITH HIGH-SPEED RAIL AS THEIR TOOL, THE CCP IS CONSTRUCTING THESE ULTRA-FAST RAIL LINES TO SECURE POLITICAL SUPPORT FROM LOCALITIES AND PROMOTE NATIONAL UNIFICATION AMONGST MINORITIES."

With the modern advent of high-speed rail, however, China received a second chance at planned rail development, but this time, rather than focusing on immediate political goals, they instead are being much more tactical about where they lay lines. Today, the central government is utilizing the highly advantageous byproducts that emerged from their initial endeavor as a means to achieve broader political and social objectives. With high-speed rail as their tool, the CCP is constructing these ultra-fast rail lines to secure political support from localities and promote national unification

19 Barry Naughton, "The Third Front: Defence Industrialization in the Chinese Interior" *The China quarterly (London)* 115, no.115 (1998): 351-386.

amongst minorities.

Byproduct 1: Urbanization Following the Path of the Railroad

In the initial era of rail development, China's rail network was built with disregard for national economic growth, and instead aimed to fulfill military goals. Despite this, as the network expanded, all the rural areas directly surrounding it quickly urbanized, with China's newest major cities cropping up alongside the tracks. Among the top 20 largest cities in 1950, 16 were near railways.[20]



Although this phenomenon can be attributed to lines being built to connect major cities, in the majority of cases, those cities did not begin urbanizing to the fullest extent until after becoming a node in the rail network. For example, the cities of Zhengzhou, Lanzhou, Taiyun, and Zibo, which were not added to the list of top 20 largest cities until 2000, can attribute their quick rises to their primary roles as railway hubs.[21] Not just an isolated event, this pattern existed in multiple provinces across different railway corridors, with the emergence of Shijiazhuan in Hebei, Zhuzhou in Hunan, and Yingtan in Fujian all being attributed to railway network connection.[22] Whereas many western countries opted to connect their railroads to their most profitable regions, China's rail network instead established the corridors that would later become the backbone of the nation's economy. In 2000, cities situated next to a major railway corridor contributed 25.36% of China's GDP.[23]

"WHEREAS MANY WESTERN COUNTRIES OPTED TO CONNECT THEIR RAILROADS TO THEIR MOST PROFITABLE REGIONS, CHINA'S RAIL NETWORK INSTEAD ESTABLISHED THE CORRIDORS THAT WOULD LATER BECOME THE BACKBONE OF THE NATION'S ECONOMY."

Just as conventional trains brought commerce, resources, and development in the past, the introduction of high-speed rail infrastructure brings even greater benefits. With ultra-fast travel times, high-speed trains greatly shorten the distance between smaller cities and national hubs, unlocking fresh economic opportunities for cities along high-speed rail corridors. For example, in December 2009, the high-speed rail line from Wuhan-Guangzhou began its service, reducing travel time between the two cities from 10.5

20 Wang et al., "Spatiotemporal Evolution of China's Railway Network in the 20th Century: An Accessibility Approach." *Transportation. Policy and practice* 43, no. 8 (2009): 774.

21 Wang et al., "Spatiotemporal Evolution of China's Railway Network in the 20th Century: An Accessibility Approach." *Transportation. Policy and practice* 43, no. 8 (2009): 774.

22 Ibid., 775.

23 Ibid., 774.

hours to just over three.[24] With 18 stations along this route, each of these localities stands to gain immensely from receiving a new railway project, whether it's through short-term investments and contracting opportunities or long-term accessibility improvements. The World Bank calculated that the estimated return from a high-speed railway project ranges from 8%-18%.[25]

As an engine for local growth, it comes as no surprise why every province in China, except Tibet, had proposed and submitted construction plans for high-speed railway lines in the provincial 12th five-year plans (2011-2015).[26] However, localities cannot build whatever their leaders have in mind. Large and crucial infrastructure projects like railways need approval from the central government before construction begins. Since the central government controls access to one of the most influential determinants in economic development, local leaders spare no effort in seeking authorization for these projects. They pay frequent visits to the state-owned Chinese Rail Corporation (CRC) and other central ministries in Beijing to make a strong case that their proposals should receive priority.[27] The central government effectively purchases the loyalty of local elites by handing out infrastructure programs, specifically rail investments. In this way, the central party has leveraged what was once a byproduct into a form of control over local governments, with the winners often being those most successful in this process rather than those with the greatest need.[28]



"THE CENTRAL GOVERNMENT EFFECTIVELY PURCHASES THE LOYALTY OF LOCAL ELITES BY HANDING OUT INFRASTRUCTURE PROGRAMS, SPECIFICALLY RAIL INVESTMENTS."

Byproduct 2: Political Unity in Frontier Regions

In addition to bringing rapid urbanization, the arrival of railroad connectivity brought rural regions closer to embracing China's national identity, transcending mere regional affiliation. By expanding the network into these areas, the railroads played an active role in forging closer connections between rural regions and the central government. For instance, prior to 1949, China had operated on five different time zones. However,

24 Lessan et al., "Stochastic model of Train Running Time and Arrival Delay: A Case Study of Wuhan-Guangzhou High-Speed Rail," *Transportation research record* 2672, no. 10 (2018): 215-223.

25 Martha B. Lawrence et al., *China's high-speed rail development*. The World Bank (2019).

26 Xiao Ma, *Localized Bargaining: The Political Economy of China's High-Speed Railway Program*, 1st ed. (New York, New York: Oxford University Press, 2022), 140.

27 Ibid.

28 Ibid., 31.

as railroads extended into previously isolated regions, those regions swiftly adopted Beijing time, with every province except Xinjiang and Tibet embracing the unified time standard by early 1950.[29] More than just logistical coordination, the adoption of Beijing time represented a broader phenomenon in which rural cities that were connected to the rail network suddenly became more conscious and in line with the capital. It fostered an increased awareness and connection to Beijing, marking an initial step towards national cohesion.

In addition to the tangible changes, the railroads also brought with them intangible shifts in the way these communities saw themselves in relation to the central government and to China as a whole. The expansion of the railroad network was accompanied by a wave of festivities marking the opening of a new line. The opening ceremonies of new line projects were elaborate events complete with red paper decorations, banners, and other festivities. They blended traditional village rituals with new, state-sponsored ones, affirming the role of party and the state.[30] These events served a dual purpose. On one hand, it brought excitement and joy to rural populations. However, alongside this excitement, there was a significant presence of propaganda aimed at reinforcing allegiance to the government and military. Cultural departments of the PLA were dispatched to construction sites all over China to perform songs and dramas that boosted soldier morale, but also educated local rural populations.[31] In their maiden voyage, the locomotives were decorated with red adornments and portraits of Mao Zedong on the front of the engine.[32] Even the official emblem of the national railroad administration symbolized the people's embrace of the national railroad system. Drawn in red, it depicted an abstract locomotive formed by the Chinese character for "person" (*ren*) embracing a steel rail.[33]

However, because this byproduct was not China's primary goal at the time of building these railroads, its influence was not brought to the regions with the most autonomy. This issue can be both attributed to a focus on national defense but also to simple geography. The western parts of the Third Front were once considered China's frontier. As the divide between urban and rural China within the interior closed, and provinces like Sichuan and Gansu modernized, the frontier got pushed further and further west towards China's autonomous regions. These regions, isolated due to their remote location and harsh geography, contained only basic rail infrastructure. In 1965, only 19% of China's national rail was in western China.[34] A direct train from Beijing to Lhasa, the capital

29 Elisabeth Köll, *Railroads and the Transformation of China*, Cambridge, Massachusetts: Harvard University Press, 2019), 249.

30 Ibid., 245.

31 Ibid.

32 Ibid.

33 Ibid.

34 Wang et al., "Spatiotemporal Evolution of China's Railway Network in the 20th Century: An Accessibility Approach." *Transportation. Policy and practice* 43, no. 8 (2009): 774.



"TODAY, THE ERA OF HIGH-SPEED RAIL OFFERS A NEW OPPORTUNITY. JUST AS STEAM ENGINES CARRIED EUROPEAN SETTLERS INTO THE LANDS OF THE NATIVE AMERICANS, SO TOO ARE HIGH-SPEED TRAINS BRINGING THE HAN INTO XINJIANG AND TIBET."

of Tibet, took a little under two days, and limited routes kept these regions separate from the rest of the rail network.[35]

Not only were these regions isolated by their geography, but they also stand out predominant ethnic minority populations, known as 少數民族 (*Shao Shu Min Zu*). Today, the majority of China's population continues to be made up of Han Chinese. Comprising 91.5% of the population, the Han people dominate Chinese politics and business.[36] They are united by shared ethnicity, and at a political level, by the impulsion to preserve and promote their culture.[37]

The central government faces ongoing challenges in minority regions, where historical annexations have fueled cultural tensions. Some groups from these regions feel a stronger connection to their locality and to Central Asia as a whole rather than to the modern Chinese state. As a result, China implements harsh policies to suppress local culture, leading to minority resistance. This becomes a self-fulfilling prophecy that minority culture is dangerous to Chinese unity, which then leads to a doubling down of repression.

With today's frontier regions encompassing minority populated lands, the concept of a national Han Chinese ethnicity lies at the core of China's goal for cultural unity. Today, the era of high-speed rail offers a new opportunity. Just as steam engines carried European settlers into the lands of the Native Americans, so too are high-speed trains bringing the Han into Xinjiang and Tibet.

These two provinces exemplify the Chinese government's use of high-speed rail as a tool to shore up control over their borderland minority regions. Xinjiang is a case-study as to how the CCP is using a high-speed railway to promote mass migration and permanent resettlement of Han Chinese. Tibet is a case-study as to how the CCP is using the rail connection to promote Han tourism as a means to slowly erase Tibetan culture and influence Just as early trains unified eastern China, bridging gaps between urban, rural, north, and south, high-speed rail is now tying China's autonomous regions closer to Beijing, both physically and culturally.

Case Study #1: Xinjiang

China has recently opened the Lanzhou-Xinjiang high-speed railway, which runs from the capital of the Gansu Province, Lanzhou, to the capital of Xinjiang Province, Urumqi. The line, which was inaugurated on November 16, 2014, cuts train travel time between the two cities from 20 hours to eight hours. Consequently, the region has experienced a new influx of migrants.

The CCP has already attempted to resettle Xinjiang, with the proportion of Han residents rising from 6% to nearly 40% between

35 John B. West, "A New Approach to Very-High-Altitude Land Travel: The Train to Lhasa, Tibet," *Annals of internal medicine* 149, no.12 (2008): 898.

36 Xiaowei Zang, *Handbook on Ethnic Minorities in China*, 1st ed. (England: Edward Elgar Publishing, 2016) 1.

37 Tim Marshall, "China," in *Prisoners of Geography*, 1st ed. (Great Britain: Elliott and Thompson Limited, 2015), 52.

1952 and 1972 respectively.[38] This was a direct result of state policy, where nearly 2 million Han immigrants were sent to state owned farms in Xinjiang.[39] Over time, due to the forced nature of this resettlement, and the ending of these policies, the Han population began to dwindle, until most recently, when the new high-speed rail reignited the flow of migrants.

The new group of Han Chinese entering Xinjiang differs from those who settled there in the past, and this change is directly tied to the emergence of high-speed rail. Migrants who settled in Xinjiang during the Mao era typically went decades without ever returning home, even for major family events like a parent's funeral.[40] However, in the last twenty years, Han migration has become more flexible and mobile. Widespread phone coverage, as well as social media have allowed migrants to stay in touch with their families and hometowns. This, coupled with enhanced mobility facilitated by high-speed rail, has led to a lifestyle among migrants that is largely detached from Xinjiang itself. Additionally, the ease of high-speed travel has attracted many seasonal workers, further exacerbating the lack of assimilation.[41] With Han migrants comes a wave of service workers and salespeople, bringing with them Han foods, products, and customs. The mass importation is aided by the previously utilized railway line, now primarily dedicated to freight traffic. This system enables migrants to live in Xinjiang without the need for meaningful interaction or assimilation into the local culture.

Just as rural areas were suddenly connected to urban centers during the Third Front movement, Xinjiang faces the same fate. High speed rail is allowing China to fight back against its own geography and unify once disparate areas on the frontier. Even before the implementation of high-speed rail, there was concern across Central Asia that Chinese migrants are sent to cultivate influence over local populations. Now, with the significantly decreased travel time to Xinjiang, China is hoping to once again promote migration while also ensuring an influx of Han culture. In the modern era, unity is not simply a byproduct of railroad development; rather, high-speed rail development is an active tool employed to enforce cultural assimilation.

Case Study #2: Tibet

The CCP's success in Xinjiang has inspired them to enact a similar strategy in Tibet, where even regular rail has had intense impacts on the population. Since July 2006, Lhasa has been linked to the rest of China through regular railway service. Passenger and

38 Lachlan McNamee, "Best Friends Make the Worst Enemies: Demographic Engineering during the Sino-Soviet Split (with Anna Zhang)," in *Settling for Less: Why States Colonize and Why They Stop,* 1st ed. (Princeton, New Jersey: Princeton University Press, 2023), 99.

39 Ibid.

40 Joniak-Lüthi Agnieszka, "Han Migration to Xinjiang Uyghur Autonomous Region: Between State Schemes and Migrants' Strategies," *Zeitschrift für Ethnologie* 138, no. 2 (2013): 155-174.

41 Ibid.

cargo trains arrive from as far away as Shanghai and Beijing, four times a day, every day.[42] They bring consumer goods from across China, improved living standards, and modernity to the ancient city, but they also bring several million Han Chinese tourists. The impending arrival of high-speed rail in Lhasa will further escalate this transformative process. Connecting Chengdu to Lhasa, the Sichuan-Tibet Railway is scheduled to fully open by 2030. Stretching nearly 1,000 miles at an altitude of 10,000 feet, travel time between the two provincial capitals will be cut from 48 hours to just 13.[43]

Due to its high altitude and complex terrain, Tibet was the last province in China to accommodate trains. As such, the region has long remained an inaccessible destination for Chinese tourists. However, faster and more reliable rail service to Tibet has changed China's whole disposition of the region towards tourism.[44] This is reflected in the official reports of Lhasa's floating population – the group of people who visit an area but who do not live there permanently nor included in the official census count.[45] Immediately before the Tibet Railway was opened, the annual floating population in Lhasa amounted to 70,000-170,000 during peak and non-peak periods, respectively. However, in November 2006, just four months after the opening of the line, approximately 1.7 million people were recorded having entered and exited Lhasa over the course of just a single month.[46] Not simply an initial wave of excitement that died down afterwards, this trend grew exponentially over the next decade. By the end of 2015, the accumulated volume of passengers arriving by train to Lhasa since the line first opened totaled 1.016 billion.[47]



"DUE TO ITS HIGH ALTITUDE AND COMPLEX TERRAIN, TIBET WAS THE LAST PROVINCE IN CHINA TO ACCOMODATE TRAINS. AS SUCH, THE REGION HAS LONG REMAINED AN INACCESSIBLE DESTINATION FOR CHINESE TOURISTS."

Just as the *tiedaobing* once arrived en masse to rural railroad construction sites, now it is the ordinary Chinese citizen flooding in. They are not bringing songs and dramas laden with state motifs, but rather, a different form of cultural assimilation, one that is applied through sheer proximity with Tibetans.

Tibet's historically complex and multiethnic landscape is being

42 Tim Marshall, "China," in *Prisoners of Geography*, 1st ed. (Great Britain: Elliott and Thompson Limited, 2015), 50.

43 Chunfang Lu and Chaoxun Cai, "Challenges and Countermeasures for Construction Safety during the Sichuan-Tibet Railway Project," *Engineering (Beijing, China)* 5, no. 5 (2019): 833-838.

44 Xiaowei Zang, *Handbook on Ethnic Minorities in China*, 1st ed. (England: Edward Elgar Publishing, 2016) 293.

45 Zai Liang, Zhen Li, Zhongdong Ma, "Changing Patterns of the Floating Population in China, 2000-2010," *Population and Development Review* 40, no. 4 (2014): 695-716.

46 Tingting et. al, "Lhasa Urbanising China in the frontier regions," *Cities* 74 (2018): 348.

47 Ibid.

smoothed and simplified into bite-size versions of Tibetan culture.[48] It is reduced to its most basic visual markers – singing, dancing, ethnic dress, and visual architecture. In its place stands an idealized vision of traditional Tibetan culture trying to pass as the real thing. This has happened as part of a broader state-led effort to refocus Tibet's narrative on its rich cultural heritage, steering it away from turbulent social and political issues. In the same way that local traditions and culture were merged with state sponsored activities during the third front movement, Tibetan culture is being merged and reduced, to create a version that is palatable for urban Han Chinese tourists. By cherry-picking elements of Tibetan culture that resonate most with Chinese tourists, the central government is aiming to depoliticize Tibet, effectively discarding the aspects that may challenge the overarching narrative of national unity.

Not only is local Tibetan culture being steamrolled over by Han tourists, but the tourism industry is also forcing out the Tibetans themselves. With high-volume tourist operations displacing locally-run enterprises, Tibetans are missing out on their share of income, and with few options for repenetrating the tourist economy, they are forced to leave their home and their lands.[49] This is evidenced by the outflow of Tibetans into neighboring provinces. Xining, the capital of Qinghai Province, is now home to about 120,000 Tibetans out of a population of 2.3 million. Chengdu, the capital of Sichuan Province, unlike Xining, historically not a place of significant Tibetan settlement, has an estimated 100,000-200,000 Tibetan residents.[50]



"IN THE ONGOING EXPANSION OF CHINA'S RAIL NETWORK... FRONTIER REGIONS MUST NAVIGATE THE DELICATE BALANCE BETWEEN PRESERVING LOCAL CULTURE AND ASSIMILATING TO A SINGULAR NATIONAL IDENTITY."

As China continues to expand its rail network, its frontier regions will continue to grapple with a growing influx of migrants and tourists. Along with them comes a surge of Han culture, posing significant challenges to the preservation of local traditions and identities in frontier areas like Xinjiang and Tibet. With high-speed rail projects dramatically compressing travel time, the movement of people and ideas becomes easier, blurring the boundaries between distinct cultural identities. In the ongoing expansion of China's rail network, much like the development witnessed in the interior during the Third Front movement, frontier regions must navigate the delicate balance between preserving local culture and assimilating to a singular national identity.

Conclusion

Under Mao's rule, the Communist Party's political decision-making in regards to railroad development was heavily influenced by its unstable political and economic standing. Short of

48 Xiaowei Zang, *Handbook on Ethnic Minorities in China*, 1st ed. (England: Edward Elgar Publishing, 2016) 302.

49 Xiaowei Zang, *Handbook on Ethnic Minorities in China*, 1st ed. (England: Edward Elgar Publishing, 2016) 302.

50 Ibid.

critical resources, surrounded by a plethora of enemies, China was forced to enact a number of shortsighted policies to address these pressing matters. By contrast, in the modern era, China finds itself in quite a comfortable spot. With its powerful economy and extensive high-speed rail network, the country has cemented its position as the world's leading railroad developer. China's success in rolling out high-speed rail has granted the central party an opportunity to reflect on its past mistakes. Now, China understands that it must make calculated decisions in order to further strengthen its position in the world. This evolution in mindset is exemplified by the development of railways in China from the founding of the PRC to present day.

Works Cited

Bilik, Naran., Fei. Guo, and Robyn R. Iredale. China's Minorities on the Move: Selected Case Studies. London; Routledge, 2015.

Brown, Rachel. "Where Will the New Silk Road Lead? The Effects of Chinese Investment and Migration in Xinjiang and Central Asia," Columbia Academic Commons, (2016).

CCTV. 2009. "新中国档案:成渝铁路--新中国的第一条铁路" August 11. https://news.cctv.com/china/20090811/105574.shtml"

Chen, Tingting, Wei Lang, Edwin Chan, and Conrad H. Philipp. "Lhasa: Urbanizing China in the Frontier Regions." Cities 74, (2018: 343–353.

Comtois, Claude. "Transport and Territorial Development in China 1949–1985." Modern Asian studies 24, no. 4 (1990): 777–818.

Esherick, Joseph W., ed. Remaking the Chinese City: Modernity and National Identity, 1900-1950. Honolulu: University of Hawaii Press, 2000.

Fan, Jingting, and Ben Zou. "Industrialization from Scratch: The 'Construction of Third Front' and Local Economic Development in China's Hinterland." Journal of development economics 152 (2021): 102698-102720.

Ferlanti, Federica. "The New Life Movement at War: Wartime Mobilization and State Control in Chongqing and Chengdu, 1938-1942." European journal of East Asian studies 11, no. 2 (2012): 187–212.

Garnaut, Anthony. "The Geography of the Great Leap Famine." Modern China 40, no. 3 (2014): 315–348.

Joniak-Liithi, Agnieszka. "Han Migration to Xinjiang Uyghur Autonomous Region: Between State Schemes and Migrants' Strategies1." Zeitschrift für Ethnologie 138, no. 2 (2013): 155–174.

Kolås, åshild. "Tourism and the Making of Place in Shangri-La." Tourism geographies 6, no. 3 (2004): 262–278.

Köll, Elisabeth. Railroads and the Transformation of China. Cambridge, Massachusetts: Harvard University Press, 2019.

Landis, John David, ed. "China bends the curve on high-speed rail." In Megaprojects for Megacities: A Comparative Casebook, 166-191. Northampton: Edward Elgar Publishing, 2022.

Lawrence, Martha B., et al. "China's High-Speed Rail Development ." The World Bank, The World Bank, 6 June 2019, documents.worldbank.org/en/publication/documents-reports/documentdetail/933411559841476316/chinas-high-speed-rail-development.

Lessan, Javad, Liping Fu, Chao Wen, Ping Huang, and Chaozhe Jiang. "Stochastic Model of Train Running Time and Arrival Delay: A Case Study of Wuhan–Guangzhou High-Speed Rail." Transportation research record 2672, no. 10 (2018): 215–223.

Li, Jiaqi, Ehsan Elahi, Peng Cheng, Aimin Wu, Fengtong Cao, Wang Jian, Mohammad Ilyas Abro, and Zainab Khalid. "The Opening of High-Speed Railway and Coordinated Development of the Core–Periphery Urban Economy in China." Sustainability (Basel, Switzerland) 15, no. 5 (2023): 4677-4692.

Li, Leona S.Z., Fiona X. Yang, and Chuantao Cui. "High‐speed Rail and Tourism in China: An Urban Agglomeration Perspective." The international journal of tourism research 21, no. 1 (2019): 45–60.

Li, Leona S.Z., Fiona X. Yang, and Chuantao Cui. "High‐speed Rail and Tourism in China: An Urban Agglomeration Perspective." The international journal of tourism research 21, no. 1 (2019): 45–60.

Liang, Zai, Zhen Li, and Zhongdong Ma. "Changing Patterns of the Floating Population in China, 2000-2010." Population and development review 40, no. 4 (2014): 695–716.

Liao, Hong, and Xiang Li. "Status and Trends of Research on China's Third Front Construction in English Language and Brief Comparison With Chinese Counterpart." SAGE open 13, no. 1 (2023): 215824402311576.

Lu, Chunfang, and Chaoxun Cai. "Challenges and Countermeasures for Construction Safety during the Sichuan–Tibet Railway Project." Engineering (Beijing, China) 5, no. 5 (2019): 833–838.

Ma, Xiao. Localized Bargaining: The Political Economy of China's High Speed Railway Program. New York, NY: Oxford University Press, 2022.

Marshall, Tim. "China." In Prisoners of Geography: Ten Maps That Tell You Everything You Need to Know About Global Politics, 40-68. Great Britain: Eliott and Thompson Limited, 2015.

Meyskens, Covell. "Third Front Railroads and Industrial Modernity in Late Maoist China." Twentieth-century China 40, no. 3 (2015): 238–260.

Stapleton, Kristin. Civilizing Chengdu : Chinese Urban Reform, 1895-1937. Cambridge, Mass: Published by the Harvard University Asia Center, 2000.

Tang, Wei, Tiancai Zhou, Jian Sun, Yurui Li, and Weipeng Li. "Accelerated Urban Expansion in Lhasa City and the Implications for Sustainable Development in a Plateau City." Sustainability (Basel, Switzerland) 9, no. 9 (2017): 1499-1518.

Vasantkumar, Chris. "Dreamworld, Shambala, Gannan: The Shangrilazation of China's 'Little Tibet'." In Mapping Shangrila, 51–50. University of Washington Press, 2014.

Wang, Jiaoe, Fengjun Jin, Huihui Mo, and Fahui Wang. "Spatiotemporal Evolution of China's Railway Network in the 20th Century: An Accessibility Approach."

Transportation research. Part A, Policy and practice 43, no. 8 (2009): 765–778.
Wang, Lan, and Hao Gu. Studies on China's High-Speed Rail New Town Planning and Development. Singapore: Springer, 2019.
Wang, Wei, Wenbo Du, Kun Liu, and Lu Tong. "The Evolution of China's Railway Network (CRN) 1999-2019: Urbanization Impact and Regional Connectivity." Urban Rail Transit 8, no. 2 (2022): 134–145.
West, John B. "A New Approach to Very-High-Altitude Land Travel: The Train to Lhasa, Tibet." Annals of internal medicine 149, no. 12 (2008): 898–900.
Yeh, Emily T., and Charlene Makley. "Urbanization, Education, and the Politics of Space on the Tibetan Plateau." Critical Asian studies 51, no. 1 (2019): 1–11.
Yu, Feng, Faqin Lin, Yihong Tang, and Changbiao Zhong. "High‐speed Railway to Success? The Effects of High‐speed Rail Connection on Regional Economic Development in China." Journal of regional science 59, no. 4 (2019): 723–742.
Zang, Xiaowei, ed. Handbook on Ethnic Minorities in China. Cheltenham, [England] ; Edward Elgar Publishing, 2016.

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