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From Mozi to Mies Van Der Rohe: Integration of Ideological and Political Education in the Horizontal Comparison of Chinese and Western Design Philosophies and Exploration of Teaching Reform Paths

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ABSTRACT

In the context of globalization, design education faces dual challenges of cultural identity crisis and insufficient innovative momentum. The urgent task for educational fields lies in drawing nourishment from traditional wisdom while addressing modern societal demands. As a core carrier of cultivating virtue and nurturing talents in higher education under the new era, ideological and political education must transcend the limitations of "generalized indoctrination" by deeply integrating professional characteristics with ideological-political elements to construct an educational model that combines intellectual depth and practical relevance. This study adopts a dual perspective—Mozi's Eastern philosophy of creation and Mies van der Rohe's Western modernist design—to initiate a cross-temporal ideological dialogue. On one hand, it focuses on the Mohist principles of "frugality in utility" and "technology for public welfare"; on the other, it analyzes Mies' minimalist aesthetics of "Less is More" and its profound interpretation of industrial ethics. By horizontally comparing the similarities and differences between Eastern and Western design philosophies in functional rationality, technological ethics, and humanistic care, this research reveals the latent ideological-political genes embedded within them: from Mozi's "non-aggressive" mechanisms to Mies' democratized spaces, and from Zhuangzi's "skill transcending into Dao" to modernism's "form follows function," humanity's exploration of design essence remains intertwined with social responsibility and cultural values. This study aims to transcend the instrumental tendencies of traditional design education, proposing a logical framework of "cultural comparison-value extraction-pathway transformation" to explore strategies for deeply integrating ideological and political education. By reconstructing course modules centered on "dialogue between traditional wisdom and modernity" and implementing teaching methods that parallel "ethical debates and innovative practices," it guides students to establish cultural confidence through historical depth, cultivate responsibility through technological critique, and comprehend sustainable development from ecological perspectives. Ultimately, this research provides theoretical support and practical paradigms for nurturing interdisciplinary design talents equipped with humanistic sensibility, global vision, and innovative capabilities.

Keywords: *Frugality, Thrift, Less is More, Pragmatism, Cultural comparison, Ethical reflection.*

1. INTRODUCTION: RESEARCH BACKGROUND AND SIGNIFICANCE

Under globalization, design education faces two major problems: weak cultural identity and innovation ability. On the one hand, the western design paradigm dominated standard teaching marginalizes cultural symbols, causing students to fall into "rootless" creation; on the other hand, the technical rationality, reducing design to a commercial. In this context, course-based

ideological and political education, as a core path of higher education in the new era to "establish virtue and cultivate people", needs to break free from the "labeling" dilemma. By deeply exploring the ideological and political genes in professional fields, it can build a "value guidance - cultural inheritance - innovation practice" three-in-one education system.

The design concepts of Mozi and Mies van der Rohe provide a cross-cultural reference for solving these problems. Mozi's "Jieyong Limin" (frugality for the people's benefit) and "Feigong Shangji" (opposing offensive wars and valuing technology) reflect ancient Chinese technical ethics and align with today's sustainable development goals. Mies van der Rohe's "less is more" and "God is in the details" demonstrate the unity of functional rationality and spirit in the industrial age. Comparison of the two reveals similarities in social responsibility and ecological awareness between Eastern and Western design philosophies, injects "cultural subjectivity" and "global dialogue ability" into design education, and helps students reestablish their value system.

Value deconstruction is to analyze Mozi's works like "Jieyong" and "Feigong" and Mies' designs such as "glass skyscrapers" to highlight their differences on topics like "utility and aesthetics," "individual and group," and "technology and nature". Cultural dialogue is to compare representative cases (e.g., Mozi's crossbow chariot and Mies' Barcelona Chair) using semiotics and hermeneutics to decode the cultural genes and value metaphors behind Eastern and Western design languages. Educational reconstruction is to combine teaching experiments and action research to develop a "dual-axis driven" course-based ideological and political education model. The "Eastern Wisdom Axis" (e.g., analyzing "Kao Gong Ji" and practicing mortise-tenon joints) strengthens cultural foundations, while the "Modern Ethics Axis" (e.g., Bauhaus workshops and sustainable design projects) stimulates critical thinking, forming a transferable ideological and political education path. This research not only provides a theoretical foundation for the cultural transformation of design education but also explores how to make design return to its essence of "creating objects to carry values" in today's technology-driven world, cultivating "new craftsmen" who are rooted in tradition.

2. COMPARATIVE STUDY OF CHINESE AND WESTERN DESIGN PHILOSOPHIES

2.1 Eastern Design Philosophy of Mohism and Taoism

Mozi regarded "labor" as the foundation of human survival, viewing creative craftsmanship as the ethical starting point of design. By contrasting his wooden kite (muyuan) with the practical cart axle, he criticized ostentatious "excessive ingenuity," advocating that technology should prioritize improving people's livelihoods. His disciples, mostly artisans, formed a collaborative creation system akin to an ancient prototype of "industry-academia-research integration." The principle of "stopping at what suffices for civilian use" transcends mere functionalism, embodying the profound wisdom of "moderate design." Mozi condemned rulers for "exploiting the people to build lavish palaces," with his concept of "frugality" not only opposing extravagance but also advocating social justice in resource distribution—achieving technological inclusivity through standardized production (e.g., precise specifications like "material dimensions of one square foot" for repeating crossbow chariot components) and modular military designs (e.g., the rotating ballista with "six-foot frame and one-foot base").

In the context of "non-aggression", Mohist defensive mechanisms (e.g., siege-resistant vehicles and suspension bridges) reveal the duality of technological application: the repeating crossbow could protect civilians or become a tool of slaughter. This vigilance against technological alienation, codified in Preparation of City Gates through rigorous operational protocols, mirrors the modern paradigm of "Responsible Research and Innovation" (RRI).

Modern interpretations of Mohist philosophy include the following aspects:

- Craftsmanship Spirit: From Mozi’s perseverance in crafting the wooden kite over three years to the precision of modern spacecraft manufacturing, this ethos embodies the professional creed of "devotion to one craft for a lifetime."
- Circular Economy Precursor: The "frugality" principle aligns with contemporary "zero-waste design," exemplified by Japanese architect Kengo Kuma’s bamboo-recycled architecture.

- Techno-Ethical Education: Simulating Mozi's "non-aggression" scenarios can guide students to explore ethical boundaries in AI and biotechnology.

The Mohist pursuit of "technology for good" and Taoist "natural non-action" (wuwei) form an ethical double helix in Eastern design. Compared to Mies van der Rohe's formal rationality of "Less is More," Mozi emphasizes "utility as virtue," while Taoism's "utility of the useless" (Zhuangzi) offers an antidote to overly utilitarian modern design. In teaching, students can compare the modular logic of repeating crossbows with Bauhaus prefabricated components, or decode the divergent expressions of "sacredness" through the symbolic Sanxingdui bronze sacred tree and the transparency of Mies' glass curtain walls.

2.2 Mies Van Der Rohe and Modernist Design

Mies Van Der Rohe's "less is more" is an ethical manifesto of the industrial age as well as an aesthetic declaration. In the Barcelona Chair, he merged an X - shaped stainless - steel frame with a curved leather cushion, turning structural mechanics into visual poetry. In the Farnsworth House, floor - to - ceiling glass walls and a floating steel frame blurred the line between architecture and nature, embodying "form follows function". His masterful use of steel and glass not only carried on the Bauhaus idea of uniting art and technology but also revealed a quasi - religious reverence for machine aesthetics. As he said, "We reject all aesthetic dogmas and formalisms. Architecture is structure dictated by the needs of the times." He chose steel and glass to represent industrial society's order and modern democracy's openness respectively.

In the Seagram Building, with modular bronze I - beams and amber glass reflections, he turned a skyscraper into a "vertical machine". It celebrated capitalism's efficiency while hinting at the alienation of instrumental rationality. Architecture risked becoming a monument to power and capital, not a vessel for humanity. In teaching, comparing Mies's machine aesthetics to Mozi's non - aggressive technology view helps students explore the balance between efficiency and humanity in technological development, revealing the complex technical and cultural dynamics behind minimalism.

Mies's claim, "Let the poor and the king share the same light", echoes Mozi's "universal love" across time. Both aim to reduce social inequality through technology. Though Mies's standardization vision appears democratic, its high cost leads to an "elitism paradox". Industrial production, meant for the masses, is often appropriated as a status symbol by capital. In contrast, Mozi's crossbow chariot modular design truly democratized technology for the common people. In design theory teaching, using Mies's "ideal versus reality" case helps students see the gap between design slogans and social impacts. Assignments like "housing for the masses" urge students to move beyond designer - centred thinking and embrace the political idea of "design for the people". Through Mies's aesthetic and Mozi's wood - working wisdom, students can explore how technology can carry humanitarian values. This cross - temporal dialogue enables students to grasp the technical philosophy behind "less is more" and rethink Eastern wisdom's potential to save contemporary design, like using Mozi's frugality to restrain consumerism.

2.3 Comparison and Dialogue between Eastern and Western Design Philosophies

Though separated by millennia, Mozi's "ingenuity of the chariot yoke" and Mies van der Rohe's "Barcelona Chair" share an underlying logic of "utility as beauty". Mozi defined the value of the chariot yoke by its capacity to "bear the weight of thirty stones," while Mies endowed cold metal with comfort through ergonomic curves, both elevating functionality into an aesthetic principle. This balance is mirrored in the Yingzao Fashi's "material grading system" from the Song Dynasty and Le Corbusier's "Modulor" theory—technical standards always serving human scale.

Mozi's defensive "non-aggression" tactics and Mies' "mass housing" both reflect design's humanitarian mission. Mozi's rotating crossbow mechanism, operated by "skilled archers assisting one another", implied collective responsibility in technological use; Mies dismantled class barriers with "universal space", his transparent glass façades metaphorizing social equity. Both sought to use technology as a tool for constructing a more ethical existence, echoing the modern "Social Design" movement. Yet differences emerge: Mohist "universal love" inspired modular crossbow carts (a collaborative "collective responsibility" system), emphasizing technology's communal purpose. Mies, though advocating democratic space, retained an elitist aesthetic—his "less is more" ethos culminated in the Farnsworth House, a private villa for the wealthy, while Mozi's defensive devices

served communal protection. This divergence reveals fundamental contrasts in how East and West perceive the "ownership of design power".

Comparative analysis shows these differences are complementary, not oppositional. Wang Shu's Ningbo Museum, with its "recycled brick and tile walls" (wa pan qiang), merges Daoist "material efficiency" with Miesian structural rationality. Zaha Hadid's Guangzhou Opera House, shaped like "river pebbles," uses parametric design to reinterpret Laozi's "great craftsmanship is seamless" philosophy of fluidity. Through such comparisons, pedagogy can critique technological neutrality: modular crossbows could defend or slaughter, glass façades symbolize openness or enable surveillance—technology's value hinges on users' ethics. Daoist "interdependence of being and non-being" offers antidotes to Western material excess, while Miesian minimalism heals Eastern ornamental overindulgence.

3. PATHWAYS FOR INTEGRATING IDEOLOGICAL AND POLITICAL EDUCATION INTO CURRICULUM

3.1 From "Universal Love and Non-Aggression" to the Awakening of Design Ethics

The Mohist philosophy of "regarding others' nations as one's own, others' families as one's own" ("Mozi: Universal Love") embodies cross-boundary empathy, which can be translated into fostering "social empathy" in design education. For example, in a "public facility design" project, students could be tasked with conducting fieldwork in urban villages, proposing solutions such as accessible pathways or shared community gardens to practice the Mohist spirit of "design for the people." Meanwhile, Mies van der Rohe's "function-first" professional ethics can be integrated through projects like "hospital wayfinding system optimization", emphasizing the life-or-death responsibility of details—font sizes and color contrasts must cater to visually impaired users.

The standardized modular components of Mozi's crossbow cart ("two axles, three wheels") resonate with contemporary "Lego-like architecture" (e.g., WikiHouse open-source building systems). Course assignments could include designing "detachable and reconfigurable dormitory furniture" using mortise-and-tenon joints or snap-fit structures, with materials restricted to bamboo or recycled plastics, aligning with the Mohist principle of "frugality".

3.2 Integration and Reconfiguration of Teaching Content

In courses like "History of World Modern Design", employ a "folded spacetime" knowledge framework to juxtapose Eastern and Western classics. Pair the Kaogong Ji's "harmony with celestial timing and terrestrial energy" with Mies' "architecture is the precise mirror of its era" to reveal how geography and zeitgeist shape design. Organize a "From Mozi to Papanek" lecture series, linking Mozi: Frugality, Victor Papanek's Design for the Real World, and modern "low-carbon design manifestos" to construct a diachronic framework for technological ethics.

Analyze the sensory amplification features of the Bronze Zongmu Mask ("eyes seeing a thousand miles, ears hearing the wind") to inspire students to design wearable devices (e.g., echolocation glasses for the blind), transforming mythological imagination into assistive technology. Contrast Marcel Breuer's tubular steel "Wassily Chair" with the curves of Ming-style armchairs to challenge the universality of "functionalism" and explore the cultural specificity of ergonomics.

Drawing on Bruno Latour's "non-human actors" concept, in a "smart trash bin design" project, require students to consider not only user behavior but also interactions between sensors, waste-decomposing bacteria, and municipal recycling systems, dismantling anthropocentric design thinking.

4. CONCLUSION

Comparing Mozi and Mies van der Rohe's design ideas reveals deep-seated commonalities between East and West in functional rationality, social responsibility, and nature-related concepts. Integrating ideological and political education into courses should be done in line with the subject's characteristics. This can be achieved by reworking teaching content, innovating teaching methods, and reforming evaluation. The goal is to combine traditional culture and modern design ethics to cultivate design talents with cultural self-confidence and a global perspective. Future work can explore using digital teaching tools in cross-cultural design education to better merge

ideological and political education with professional education.

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