

Proposing New Concepts for Understanding the Values and Trading of Culture to Enable More Effective Public Investment;

- . 3-I Cultural Values for the ABC-P Model,
- . The De-Monetization Zone (DMZ) of Culture,
- . Emotional Economics, and
- . The City as a Vessel for Cultural Attractiveness

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The future of investment in culture: supporting diverse models to build resilience and sustainability (May 29, 2025)



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“Proposing New Concepts for Understanding the Values and Trading of Culture to Enable More Effective Public Investment; 3-I Cultural Values for the ABC-P Model, the De-Monetization Zone(DMZ) of Culture, Emotional Economics, and the City as a Vessel for Cultural Attractiveness”¹⁾

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1) The Korean title of this article is “보다 효과적인 공공문화투자를 위해, 문화의 가치와 거래 이해에 필요한 새로운 개념 몇 가지 제안 ; 3-I Cultural Values for ABC-P 문화가치 모델, 문화의 탈화폐화지대(DMZ), 감정경제학, 문화매력을 담는 그릇으로서 도시”(김해보, 2025)

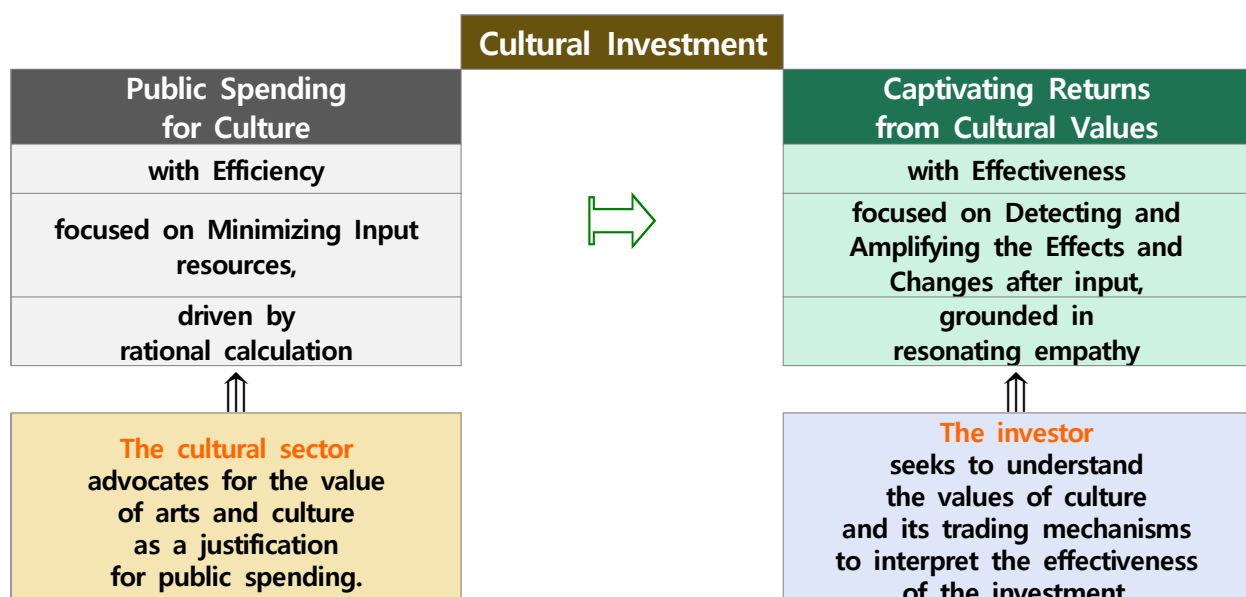
0. A Paradigm Shift in the Perception of Public Investment in Culture

(1) From “Efficient Spending of Public Resources” to “Effective Captivating Returns from Cultural Values”

Investment, by definition, implies an expectation of return in addition to the resources expended.

However, in the public sector, the phrase “investment in culture” has often been understood simply as public spending on culture, with repeated calls for increasing such expenditures. Under this framing, public finance officers—responsible for allocating resources across all sectors—**tend to approach cultural budgets with a mindset focused on efficiency, aiming to minimize expenditures based on rational calculations.** In contrast, the cultural sector has responded by asserting the intrinsic and social values of the arts as a justification for greater public spending. Yet, because these two sectors operate under fundamentally different worldviews, their arguments often fail to establish common ground, lacking objective evidence and shared logic. As a result, increasing public cultural budgets has frequently relied on political compromise rather than principled justification.

On the other hand, when advocates propose recognizing cultural spending as investment, they are often accused of commodifying culture and betraying its intrinsic value. **However, if public expenditures were instead viewed as investments, then the positive changes observed after resource input could be used to interpret the value of culture and the arts from a perspective of effectiveness.** In this context, subtle and sensitive empathic intelligence becomes key to identifying and accumulating various, often unexpected, outcomes. **This empathetic sensibility helps reveal and interpret the compounded effects of cultural investment more profoundly than any rational pursuit of mere input-efficiency.** Such an approach requires a different kind of mindset than that used to pursue fiscal minimization. Wouldn't it be more effective if the investor—that is, the decision-maker in charge of public finances—were directly engaged in interpreting the effects of investment, rather than relying on the cultural sector to continually advocate for the value of culture from the outside? This is why cultural governance must be equipped with both rational logic and value-oriented sensibility.



To call for increased public investment in the cultural sector by demonstrating greater returns, it is essential to understand the mechanisms of cultural value creation and exchange. This is the starting point for discovering where innovation in cultural investment truly lies. However, the way cultural value is perceived and traded today has diverged significantly from the past. As cultural value is increasingly recognized as a central resource in the new form of capitalism, the longstanding assumption that culture should naturally belong to the public domain is being fundamentally challenged.

Recent controversies in Korea clearly illustrate how shifting technologies and socio-economic paradigms are destabilizing previous concepts of cultural value. For example, legal disputes over the copyrights to traditional Korean drum dances (Ogomu and Samgomu) choreographed by the late intangible cultural heritage holder Lee Mae-Bang raised profound questions about the ownership of culture. Another case involved the sale of a Hunminjeongeum Haerye manuscript as a non-fungible token (NFT) by Kansong Art Museum—an act that stirred public criticism over the commodification of a national treasure. Although such events may appear as passing gossip to the general public, for those in the cultural field, they represent serious challenges that demand deep reflection. Efforts to preserve and protect communal cultural heritage as public assets are commendable. However, in today's landscape—marked by heated battles over copyrights, trademarks, and even the “wars” to secure cultural resources—the claim that culture is inherently a collective property has become more of an idealistic hope than a practical reality.

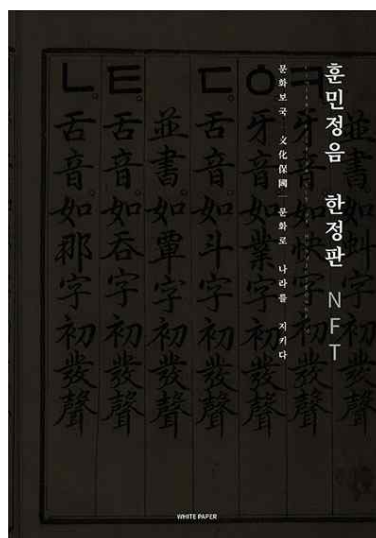
The phrase “culture is a public good” is often raised as a banner by public policy actors to justify their own legitimacy—yet in practice, it remains more of an aspiration than a reality. In truth, culture today functions as a core service and asset of advanced cultural capitalism. It is strategically leveraged by corporations and individuals in pursuit of profit. The competition over cultural value is fierce, even if it often remains invisible. Therefore, it is no longer sustainable to base cultural investment strategies on outdated assumptions about how cultural value is generated, owned, and exchanged.



"Debate Erupts Over Copyright Claims on Traditional Drum Dances: Samgomu and Ogomu"

(Source: Yonhap News, December 17, 2018)

They argue, *"We oppose the privatization of traditional cultural heritage—we want to dance that dance too."*

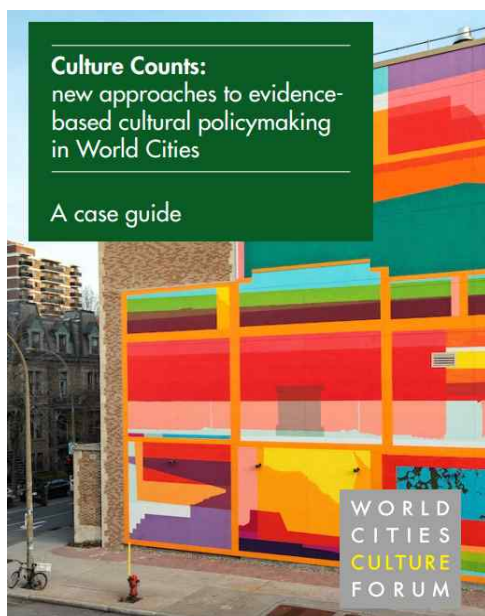


"A 1-Billion-Won Hunminjeongeum NFT Becomes a Hot Topic... Why Is the Kansong Art Museum Launching an NFT Project with a National Treasure?"

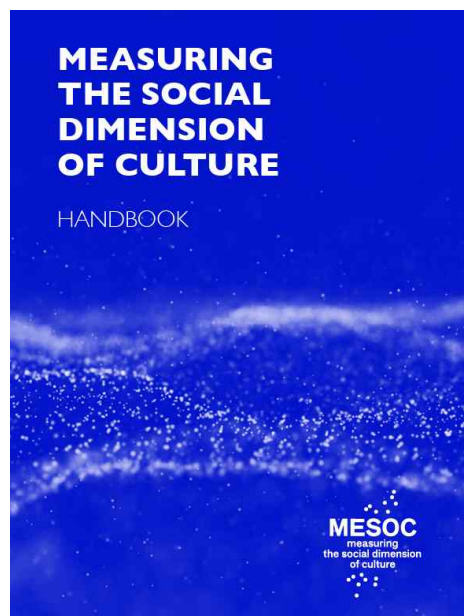
(Source: Maeil Business Newspaper, June 20, 2022)

Some argue that public spending on culture should be justified solely by its public value, rather than by invoking the concept of “investment,” which mostly implies an economic return. I also suggest that framing culture in economic terms risks undermining its essence and even fails as a strategy to expand the cultural

budget. For instance, the prevailing model of evidence-based policy—grounded in positivist approaches—has often led to an overemphasis on measurable, quantitative outcomes, inadvertently narrowing how the value of arts and culture is understood. Encouragingly, the European Union’s MESOC Handbook(2023), Measuring the Social Dimension of Culture, adopted a more holistic <Theory of Change> framework, which somewhat resonates with Eastern worldviews. The report acknowledges the limits of causality claims in policymaking—recognizing that social change occurs constantly, with or without policy intervention. It therefore advocates focusing instead on contextual factors that shape broad, multi-layered impacts of cultural investment.



『Culture Counts: new approaches to evidence-based cultural policymaking in World Cities.』 (WCCF, 2021)



『Measuring the Social Dimension of Culture(MESOC): Hand Book.』 (Transit Projectes, EU, 2023)

In conclusion, I advocate for the term public investment in culture rather than public spending. However, this investment must be based on a clear understanding of the evolving value and transaction mechanisms of culture, and it should involve a rigorous, scientific approach to inputs and outputs. A rhetorical framing that merely sounds appealing is inadequate. In my view, whether we call it public spending or public investment, what truly matters is our ability to understand not only the economic returns derived from allocating resources to culture, but also the invisible social values that are generated in the process. Without such understanding, there is a real risk that culture will be misappropriated for profit or private interests. To this end, I propose the <3-I Cultural Values for ABC-P> model as a new framework for recognizing the value of culture—one that incorporates the intangible dimensions long overlooked by positivist, evidence-based approaches to cultural policy. In addition, I introduce the concept of <Emotional Economics>, which helps us interpret how value transactions operate in the affect-driven capitalist system that has emerged in the era of the Affective Economy. This framework captures how emotional and mental engagement—not merely rational choice—now drives value creation and exchange. By applying these concepts, we can better understand how big tech companies are accumulating vast capital through the construction of <De-Monetization Zones(DMZs)>—virtual domains where value transactions occur through intangible tokens and emotional engagement, rather than traditional monetary exchange. Accordingly, this article also proposes that public cultural policy must not only recognize these DMZs, but actively construct and protect cultural DMZs as public zones for value creation, exchange, and equitable redistribution of culture.

(2) Eastern Wisdoms that Facilitate the Perceptual Shift

To grasp the flow of both visible and invisible dimensions—culture, money, and value—we'd better turn to the wisdom of Eastern thought. This pivot helps address the inherent limitations and dilemmas faced by cultural policy when it has leaned too heavily on positivist, evidence-based frameworks, despite its rhetorical emphasis on the social value of culture. Furthermore, as cultural capitalism rapidly evolves alongside technological innovation, this perspective offers crucial insight into the changing nature of cultural value exchange.

Eastern Wisdom	Original Meaning	Application to Cultural Policy Innovation
Gi-Jeong-Sangsaeng (기정상생, 奇正相生)	The intangible(gi, 奇) and the tangible(jeong, 正) give life to each other.	Overcoming the limits of positivist, evidence-based policy
Il-Che-Yu-Shim-Jo (일체유심조, 一切唯心造)	All things are created by the mind.	Understanding the Affective Economy, where emotion drives value
Gyeong-Se-Je-Min (경세제민, 經世濟民)	To bring order to the world and to relieve the people's suffering (the original meaning of Jingji (經濟), The translation of "Economy")	Reframing cultural economy from "making money through culture" to "living well with culture"
Mu-Wi-Ji-Wi (무위지위, 無爲之爲)	Doing through not-Doing	From Arm's Length to Arms' Length: Embracing Mutual Autonomy in Cultural Governance

1) Gi-Jeong-Sangsaeng(奇正相生): Overcoming the Limitations of Evidence-Based Policy

Gi-Jeong-Sangsaeng(기정상생, 奇正相生)

"The intangible(gi, 奇) and the tangible(jeong, 正) give life to each other."

(from The Art of War (Sunzi Bingfa, 孫子兵法))

Understanding the Invisible Forces That Move the World

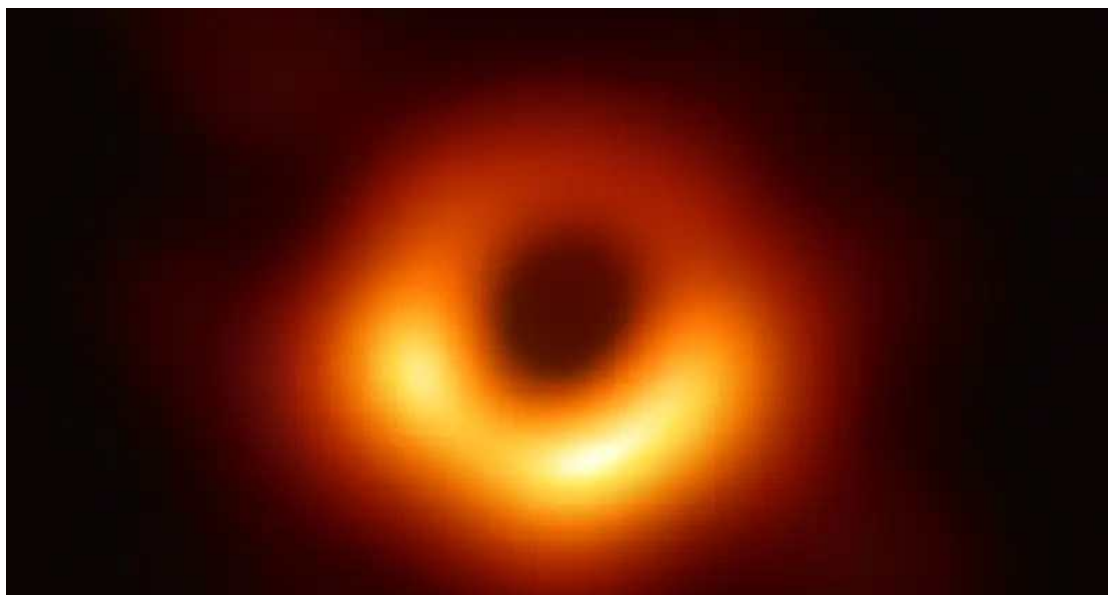
Let us begin with Gi-Jeong-Sangsaeng(奇正相生)²⁾, a strategic insight found in The Art of War by Sun Tzu. This idea translates literally as: "The orthodox and the unorthodox give rise to one another." In modern terms, the tangible and the intangible co-evolve or give life to each other. While The Art of War does not define gi(奇) and jeong(正) in the book, its application reflects the ancient East Asian

2) 凡戰者 以正合 以奇勝...故善出奇者 無窮如天地 不竭如江河 終而復始 日月是也 死而復生 四時是也...戰勢不過奇正 奇勢之變 不可勝窮也 奇正相生 如循環之無端 孰能窮之哉 (孫子兵法 5篇 兵勢) ("Warfare is waged with the orthodox (jeong, 正), but victory is achieved through the unorthodox (gi, 奇)... Those skilled in deploying the unorthodox are boundless like heaven and earth, inexhaustible like rivers and seas. The dynamics of war consist only of the orthodox and the unorthodox, but their transformations are endless. The interplay between them is like a circle without beginning or end." (The Art of War, Chapter 5, "Strategic Power")

worldview—shaped by yin-yang(陰陽) dualism—that no force operates alone. Every action involves a dynamic interplay between material (tangible) and immaterial (intangible) forces. When applied to cultural policy, this principle suggests that we cannot understand emotional, cultural, and social change by focusing on jeong(正, tangible outcomes) alone. We must also attend to gi(奇)—the unmeasurable, symbolic, and emotional currents that underpin human culture. Just as gi(奇) and jeong(正) interact in an endless loop, individual experience and collective systems, narratives and data, must circulate to produce true cultural value.

Since the rise of modern science, numbers have come to be seen as more objective than stories. This has led to a tendency in cultural policy to privilege quantification—especially when justifying public expenditure. As a result, even the value of culture has been increasingly interpreted through the narrow lens of measurable outcomes. Evidence-based policy(EBP), while helpful, has become an unavoidable orthodoxy. **Public administration, with its emphasis on standardized or universal communication, often fails to recognize the language of individuality and nuance of the context.** And ironically, when we speak of intrinsic value—that which is inherently intangible—it is often dismissed as unscientific or idealistic.

Yet we cannot deny two profound realities: first, that the universe is largely composed of dark matter—which modern science still cannot see, measure, or fully comprehend—and second, that most of human life is shaped by forces that cannot be adequately expressed in numbers. The recent trend of grounding cultural policy in quantitative evidence under the slogan of "realizing the social value of culture" often ends up undermining the very goal of expanding culture's intrinsic value. The drive to quantify change brought about by arts and culture frequently overlooks the broader, non-measurable outcomes, and the resulting performance metrics—crafted to meet bureaucratic expectations—are sometimes inflated or distorted to show every fiscal year's growth at all costs.

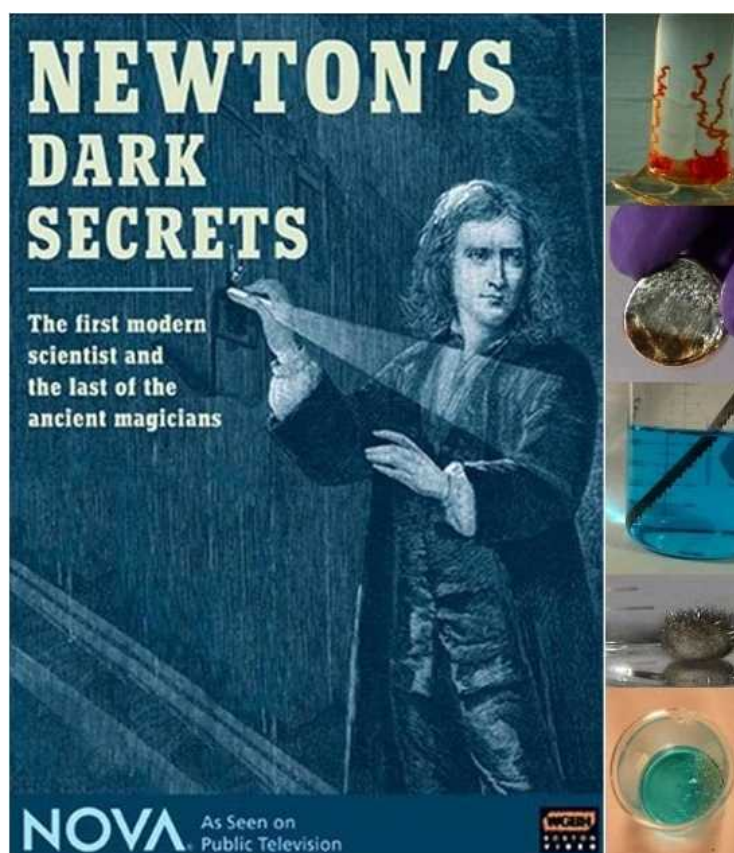


The first-ever image of a black hole, captured in 2019. It required the participation of over 200 scientists and the global coordination of eight massive radio telescopes as part of the Event Horizon Telescope project. It shows that even the invisible can be proven through collective effort and intelligent inference.

(Source : [BBC News Korea](#), April 11, 2019).

To believe that only tangible things like cash are worth measuring or valuing is, ironically, an outdated mindset, now. Today's rapidly evolving technologies—blockchain, digital platforms, AI with emotional recognition—have begun to transform formerly intangible dimensions into actionable, tangible resources. In this new capitalist era shaped by technology, understanding how cultural value is exchanged, and how culture fundamentally functions, requires us to embrace the principle of Gi-Jeong-Sangsaeng (奇正相生): the inseparable coexistence of the seen and the unseen, the measurable and the immeasurable. **We must pay more attention to these unseen forces that move the world.**

As the Japanese physicist and historian of science Yoshitaka Yamamoto(山本義隆) explained in his book <磁力と重力の発見 (The Discovery of Magnetism and Gravity)> translated into Korean <과학의 탄생 (The Birth of Science)>, modern science emerged only when premodern intuitions about magnetism and gravity were finally expressed through the formal language of physics. Echoing this, economist John Maynard Keynes famously remarked that Newton was not the first of the age of reason, but the last of the magicians. **Just as we perceive the presence of black holes not by direct observation, but by interpreting the gravitational influence they exert on surrounding matter, so too must the cultural sector evolve beyond magical thinking—and into a science of the invisible.** The cultural field must learn from the methodology and perseverance of the Event Horizon Telescope project by global scientists who revealed the black hole: by joining forces, investing in observation, and refusing to dismiss what cannot yet be seen. Just as Newton gave form to an invisible force through the physical formula of gravity, we must now give form to the invisible forces of culture.



"Newton was not the first of the age of the reason he was the last of the magicians"

by John Maynard Keynes, Essays in Biography (1936)

2) Il-Che-Yu-Shim-Jo(一切唯心造): Understanding the Affective Economy

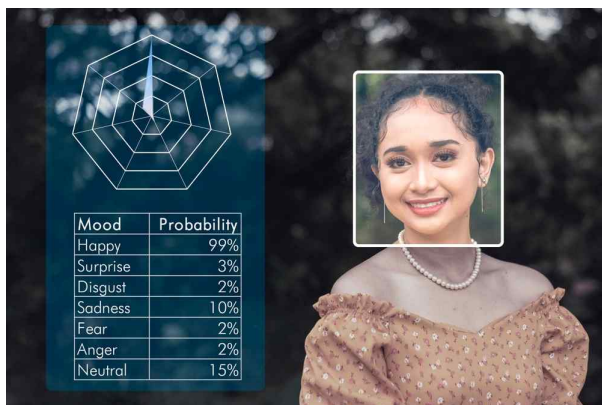
Il-Che-Yu-Shim-Jo(일체유심조, 一切唯心造)

"All things are created by the mind"

(from the Avatamsaka Sūtra(華嚴經))

Understanding the Affective Economy : When the Movements of the Mind Generate Money.

Among all the intangible, the human mind is perhaps the most representative and profound. So, it is worth paying attention to the Buddhist concept of Il-Che-Yu-Shim-Jo (一切唯心造) from the Avatamsaka Sūtra(華嚴經), which teaches that "all things are created by the mind." **It is because we are now living in the era of the Affective Economy, where it is the movements of the mind—our emotional impulses and sentiments—that shape the flow of money.** Major tech companies are investing heavily in platforms that capture, commodify, and respond to the emotional expressions embedded in digital life: social media stories, images, "likes," shares, and the click patterns that reflect users' emotional engagement. Artificial Intelligence is now being trained not just to interpret language or logic, but to read the human mind—often better than humans themselves.



"AI That Reads Human Emotions: Open-Source Dataset Project Launches" (Source : AI Times, Oct. 30, 2023)

제목	[마감]AI 학습용 데이터 구축을 위한 '배우' 셀카 이미지 제공자 모집 공고				
작성자	한국연극협회	등록일	2020-10-21	조회수	37652
첨부파일					



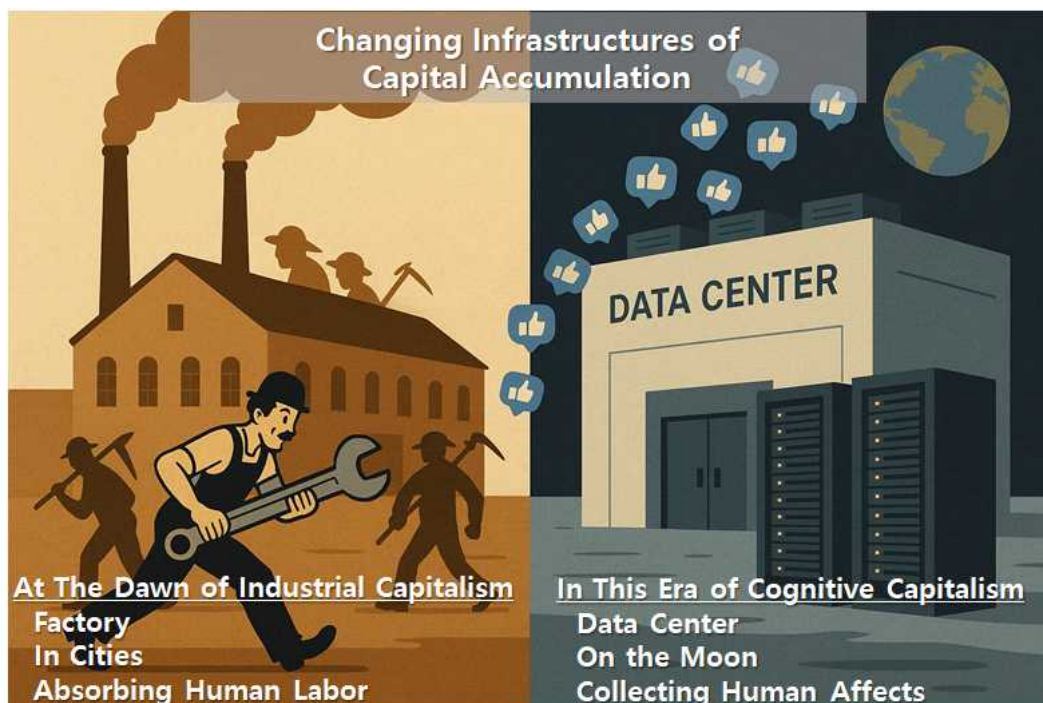
- 목 적** 한국인 얼굴 이미지를 통한 AI 인공지능 대규모 학습데이터 구축
(학습 데이터 이외에는 사용되지 않음)
- 참가 대상** 대한민국인 20대 ~ 50대 배우/배우지망생 (방송, 연극, 뮤지컬계 등 주/조연 관계)
- 수행 과업** 다양한 장소에서 사전에 부여 받은 감정에 해당되는 얼굴 표정을 짓고 카메라 또는 핸드폰을 이용하여 찍은 본인의 얼굴 사진을 제출 (배경 포함 셀카 사진)
*이미지 제공 보수 : 1,000,000원 / 1,000장 - 세금3.3% 공제 가능

In October 2020, the Korea Theatre Association posted a public announcement recruiting actors to submit selfies for use in building AI training datasets. (Source: Korea Theatre Association website)

In this landscape, data has replaced oil as the most valuable fuel for the capitalism. The raw material that powers the Affective Economy is behavioral data, extracted from the full spectrum of human cultural lives filled with emotional responses and actions—including the vast cultural heritage accumulated by humanity over time. **Emotions are no longer fleeting; they are quantifiable, storable, and most importantly, monetizable.**

I have referred to this phenomenon as <Culture for the Algorithm>³⁾, a defining feature of the <Culture as Algorithm> era. Here, culture is not created and consumed just by humans. **Culture is now increasingly being “generated”, filtered under the guise of algorithmic recommendation, and evaluated in the name of trending popularity by machines, using culture itself as training data to refine their “human-like” capabilities.** As a result, we are witnessing a profound inversion: the economy no longer simply reflects material scarcity or supply and demand, but the value of capturing emotion, or attention and symbolic meaning. And this transformation is shaping not only markets but also the core logic of cultural policy. **Here, the universal ethic for AI is culturally pointless(CP).**

Since the advent of modern capitalism, capitalists have consistently sought to capture and convert that which is light, free, and fluid into something that can be accumulated as their own capital. To do so, they have always invested in the heavy infrastructure most suitable for their era. In the age of early industrial capitalism, the factories in the city served as the core infrastructure—built to absorb surplus laborers drifting away from rural lands. **In today’s digital capitalism, that role has shifted to the data center, designed to capture the countless emotional impulses (affect, 情動) and fragmented traces of human identity now drifting freely through virtual space.**



An illustration generated by ChatGPT based on a descriptive paragraph about the evolution of capital accumulation infrastructures across different eras.

3) See “Culture as Algorithm 시대의 희한한 문화현상과 정책 이슈들” (전파진흥지, Vol.32, 2022년 겨울호, 2022.12월, 한국전파진흥협회) “Strange Cultural Phenomena and Policy Issues in the Era of Culture as Algorithm” (Hae-Bo Kim, Korea Radio Promotion Association Magazine, Vol. 32, Winter 2022, Korea Radio Promotion Association)

Global Big Tech companies, operating beyond national borders and outside the reach of state control, are driving this logic to unprecedented extremes. They are now constructing data center infrastructure not only on Earth, but on the Moon. On April 1, 2023, South Korea's Naver announced the world's first plan to establish a lunar data center. By March 2025, a U.S. company, Lonestar, had successfully delivered a small-scale data center module to the Moon. This is not science fiction—it is our present reality. **In this context, for cultural policy to focus on the mind is no longer just philosophically appropriate—it is strategically urgent and scientifically justified. Because the emotional dimension of human life, once considered intangible and private, has become the new frontier for capitalist extraction.** Cultural policy must recognize and respond to this shift.

But!
What kind of
"mind" (心, 情, 마음)?
are we really talking about?

Is it the mind of calculating reason?
Or the mind of empathic emotion?
for the era of Locality, Individuality, Diversity, and Fluid Transformation.

However, when we speak of "the mind," it is important to recognize that Eastern and Western philosophies emphasize different dimensions of mental life. The types of mind that public policies aim to measure or activate differ considerably depending on which intellectual tradition they are grounded in. Broadly speaking, Western thought tends to uphold universal and abstract principles, often elevating rationality as the highest function of the mind. In contrast, Eastern perspectives highlight the emotional and perceptual nature of the mind—seeing individuals as ever-changing beings embedded in relational and contextual realities.

We are now living in a time when locality, individuality, diversity, and fluid transformation have come to the forefront. In such a moment, **it is crucial to pay closer attention to both aspects of the mind: not only the rational mind that calculates, but also the empathic mind that connects.** Only by doing so can we begin to restore a more meaningful balance between reason and feeling.

3) Gyeong-Se-Je-Min(經世濟民): From Making Money through Culture to Living Well with Culture

Gyeong-Se-Je-Min(경세제민, 經世濟民) “To bring order to the world and to relieve the people’s suffering” <i>(The original meaning of 經濟(경제, GyeongJe), The East-Asian translation of “Economy”)</i>	
oiko nomos(οἰκονόμος) ⇨ Economy (Efficient management of household resources)	Gyeong-Se-Je-Min(經世濟民) ⇨ 經濟(GyeongJe) (Governing with a national perspective to ensure the comfort and prosperity of the people)
Economy ⇔ 經世濟民 Reorienting the Meaning of Translation <i>The social is the economic.</i>	

To reconcile the long-standing goals of cultural policy—generating economic value through culture and expanding the social value of culture—we need to reframe our understanding of economy through an Eastern philosophical lens. Many of the philosophical and social science concepts currently used in East Asia were originally imported from the West during the modernization period, often through translation processes that reflected the worldview of translators of the time. A notable example is the translation of the English word “economy” into the Sino-Korean compound “GyeongJe”(경제, 經濟). **However, “GyeongJe”(經濟) is actually a shortened form of Gyeong-Se-Je-Min(經世濟民)—a classical Confucian phrase that means “To bring order to the world and to relieve the people’s suffering.”** Unlike the original Western concept, which focused on the efficient management of private household resources, gyeong-se-je-min implies a public, state-level orientation toward wellbeing and societal stability.

Now, if we reverse the translation direction—interpreting Gyeong-Se-Je-Min(經世濟民) as economy—we arrive at a very different proposition: Social value is economic value. Under this expanded definition, the economy is not merely about creating monetary returns through cultural industries, but also about investing in social wellbeing, enriching the lives of citizens, and addressing collective challenges. This too constitutes economic value creation—rooted in cultural policy.

Cultural 經世濟民 ~ Living Well with Culture V Cultural Economy ~ Making Money through Culture
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In this light, Cultural Economy (i.e., making money through culture) should be seen as just one dimension of a broader Cultural Gyeong-Se-Je-Min(經世濟民) approach—living well with culture.

Reframing the discourse in this way, grounded in long-standing Eastern thought traditions, may help overcome the limitations of current cultural policy paradigms.

4) Mu-Wi-Ji-Wi(無爲之爲): From "Arm's Length" to "Arms' Length" in Cultural Governance

Mu-Wi-Ji-Wi(무위지위, 無爲之爲)

"Doing through not-Doing"

(The philosophies of Daoism and Confucianism)

**Mu-Wi(무위, 無爲); a mode of restraint
that waits for the other's autonomous transformation
calls for a rethinking of policy intervention.**

Mu-Wi(무위, 無爲) refers to refraining from forced action—particularly the ruler's avoidance of imposing unnatural control. While it is often associated with the Daoist philosophy of Mu-wi-ja-yeon(무위자연, 無爲自然)⁴, or non-action in accordance with nature, the concept was also recognized in Confucianism as a virtue of enlightened rulership⁵. Mu-Wi-Ji-Wi(무위지위, 無爲之爲) suggests that meaningful transformation can occur precisely through not acting. **Here, it is crucial to understand that Mu-Wi(무위, 無爲) does not mean doing nothing at all. Rather, it reflects a profound recognition that all things under heaven—humans and nature alike—follow their own course, each guided by its intrinsic nature and inherent autonomy.**⁶.

In recent years, the global success of K-pop and K-dramas has drawn attention to the role of government policy in South Korea. Given the country's strong tradition of centralized cultural governance, many have assumed that state intervention must have been instrumental. However, some sociologists argue that the absence of direct state involvement was in fact a key factor. They point out that belated government attempts to "jump on the bandwagon" often imposed bureaucratic metrics and commercialization pressures for more revenue that distorted the organic spread of Korean culture. Others highlight the earlier groundwork laid by President Kim Dae-jung, who opened Korea to Japanese pop culture and formally embraced the Arm's Length Principle, emphasizing artistic autonomy and diversity. Whether one emphasizes state restraint or proactive support, both perspectives affirm the value of Mu-Wi-Ji-Wi(무위지위, 無爲之爲) in cultural governance.

Shift from
<Arm's Length> principle,
centered on limiting state intervention
to <Arms' Length> principle,
that recognizes the autonomy and multiplicity of stakeholders.

4) 爲無爲 則無不治 ("When action is taken through non-action (wu-wei), there is nothing that cannot be governed.") (Laozi, Tao Te Ching, Chapter 3)

5) 子曰 無爲而治者 其舜也與! 夫何爲哉? 恭己正南面而已矣 (Confucius said, "If there were ever a ruler who governed through wu-wei (non-action), it would be Shun. What did he do? He simply held himself with reverence and faced south as he sat.") (The Analects, Book 15 - Duke Ling of Wei)

6) 道常無爲 而無不爲 侯王若能守之 萬物將自化 (The Dao is always without action, yet there is nothing it does not accomplish. If rulers and kings can abide by this, all things will transform themselves.) (Laozi, Tao Te Ching, Chapter 37)

The Arm's Length Principle—originating in the UK—has long been regarded as a cornerstone of cultural governance around the world. It suggests that governments should maintain a respectful distance from cultural actors to protect their independence. However, this still focuses on how far the state should reach, not on how many arms are involved in shaping cultural ecosystems. The essence of Mu-Wi-Ji-Wi(無爲之爲), by contrast, lies in recognizing that every stakeholder is an active, autonomous agent of change. In this worldview, no entity exists in isolation.

What truly matters is not merely adjusting the length of the government's arm, but acknowledging the many arms at play—the extended reach of artists, audiences, markets, platforms, and institutions—all dynamically interacting within the cultural ecology. This leads us to a more nuanced framework: the “Arms' Length Principle” (plural)—a shift from maintaining distance to recognizing distributed agency. True Mu-Wi-Ji-Wi(無爲之爲) involves providing invisible support, facilitating the self-organizing vitality of the ecosystem, and serving as a catalyst for natural, sustainable cultural development.



**Shift from <Arm's Length> principle
to <Arms' Length> principle
based on Mu-Wi-Ji-Wi(무위지위, 無爲之爲)**

(3) Innovation as the Ability to Understand and Respond to Change of World

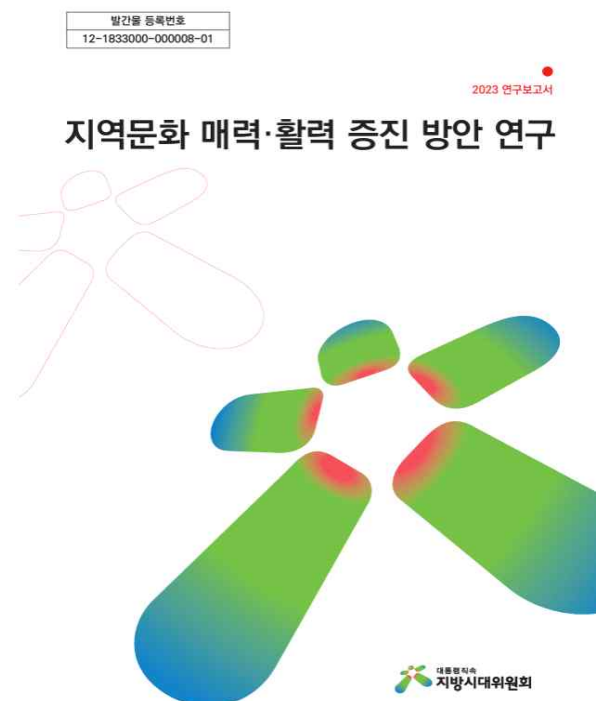
When we speak of innovation in cultural investment, we often think of new implementation methods or novel investment agendas. Indeed, cultural policy has evolved far beyond simple grant-making to include a wide array of programs: capacity-building for cultural professionals, infrastructure investment, support for social enterprises, and initiatives for commodification and distribution of cultural goods.

Since the 2000s, Korea's cultural policy priorities have continually evolved—ranging from local cultural revitalization and arts education for creativity, to cultural rights-based welfare services, artist support, mental health initiatives, cultural approaches to social problem-solving, and more recently, responses to the looming extinction of rural cities facing the population cliff. It would be misleading to assume that the latest initiative is inherently more innovative. Cultural policy agendas are typically shaped by the specific needs of their time. Changes in investment focus have been natural responses to major societal challenges such as the COVID-19 pandemic or population decline.

<Some Cases of Research on Emerging Cultural Policy Agendas in Korea>



『Cultural Policy in Action Engaging with Social Issues _ Cases and Implications from Local Foundations for Arts & Culture』 (Hae-Bo KIM et al., The National Assembly of Foundations for Arts & Culture, 2023)



『Research on Strategies to Enhance Regional Attraction and Vitality through Locality & Culture』 (Hae-Bo KIM et al, Presidential Committee for Decentralization and Balanced Development, 2024)

7) In Korean 『사회문제해결 문화정책 현장 _ 지역문화재단들의 사례와 시사점』 (김해보 외, 한국광역문화재단연합회, 2023)

8) In Korean 『지역문화 매력·활력 증진방안 연구』 (김해보 외, 대통령직속 지방시대위원회, 2023)

Despite changing governments and political ideologies, one policy instrument has remained a central investment priority: the culture voucher. But does this persistence reflect its inherent effectiveness in realizing cultural rights? **I would argue otherwise. Its dominance stems not from its transformative power but from its convenience as a Key Performance Indicator (KPI)—easily counted, easily reported. In truth, since the dawn of the so-called “Century of Culture”, there have been few meaningful innovations in the way cultural policy is executed. This is largely because cultural policy implementation remains tightly bound by the legal and institutional frameworks of public administration—frameworks that rarely accommodate cultural exceptions.** In many cases, these frameworks have led to distorted representations of the cultural field, with practitioners forced to manipulate data to fit bureaucratic expectations. This is the consequence of neoliberalism, which has elevated efficiency as the supreme value in public governance, and of a distorted form of democracy in South Korea, where transparency has degenerated into a system of mutual surveillance. The result is a deeply anti-cultural structure that undermines the spirit of cultural innovation.

We must now dismantle the irony of evidence-based cultural policy, in which only system-generated outcomes are valued while humanly perceived values are ignored. **It is time to move beyond the positivist epistemology of Western rationalism and reclaim the legitimacy of the invisible.** We must also challenge the philosophical defeatism that confines Asian thought to the periphery—producing local data only to align with so-called global principles dictated by the West. A global summit like today's is not a place to search for local case studies that fit into the so-called universal principles established by modern civilization as global standards. **It is crucial to recognize that the East and West, as well as the Global South and Global North, are shaped by distinct foundational principles. Through mutual learning and exchange, we can lay the foundation for a new cultural science that reflects plural ways of knowing.**

True innovation lies in resonance with change. Radical transformation for its own sake often provokes resistance. **Innovation is not about showcasing new values; it is about opening ourselves to change with a receptive mind.** The evolution of cultural investment areas has felt relevant precisely because it has responded organically to societal needs. So what changes must we now respond to in our execution of cultural policy?

While the cultural implications of AI-generated content may feel like a tidal wave, the deeper transformations are already here. As previously mentioned, the Affective Economy and the De-Monetization of cultural transactions are not abstract futures—they are current realities. **Understanding and attuning to how the cultural ecosystem—now radically transformed by technological and societal change—actually functions is the starting point for innovation in cultural investment.** To this end, I would like to draw on Eastern wisdom and propose four conceptual tools that may help us better grasp how cultural value is now exchanged within this new ecosystem.



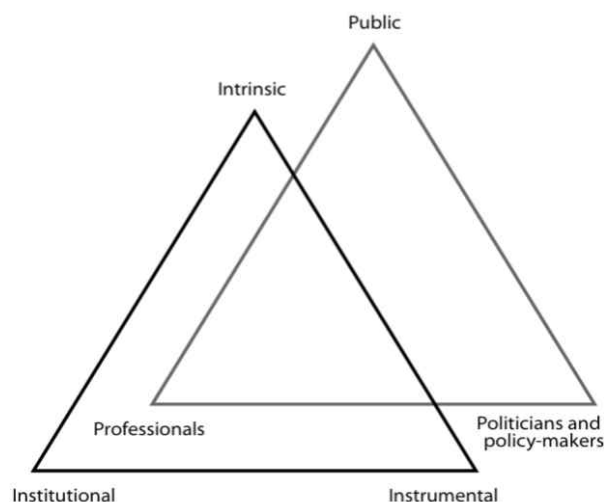
1. The <3-I Cultural Values for ABC-P> Model

(1) A Value Framework That Encompasses Economic Value through Social Value

As technology evolves, so too do the ways in which cultural value is generated, exchanged, and perceived. Before discussing innovation, it is crucial to examine how value transactions in the cultural sector are currently taking place. **Choosing the right framework of understanding for cultural value is the essential starting point for this process.**

Over the years, numerous frameworks have been proposed to articulate the value of culture—not only by economists, but also by advocates aiming to defend its broader significance. As detailed in “Understanding the Value and Impacts of Cultural Experiences – A Literature Review” (John D. Carnwath & Alan S. Brown, Arts Council England, 2014), a vast range of models have been introduced. However, few have gained consensus or widespread acceptance. Most researchers working within the paradigm of evidence-based policy have relied on empirical validation of tangible value. Yet, cultural value is deeply rooted in language, context, and worldview—elements that differ significantly across cultural regions. Unfortunately, these differences are often overlooked in favor of Western-centric concepts and value systems. **In particular, the tendency to draw a rigid and overly mechanical line between individual profit and collective well-being has often prevented the emergence of a truly workable and inclusive universal framework.**

<3-I Values for 3-P model>
by John Holden(2006)



In 2008, I proposed an alternative framework to better support values-centered innovation in public cultural services. My model emphasized the need to first understand the components of cultural value and their mechanisms of exchange⁹⁾. In this paper, I adapted John Holden's(2006)¹⁰⁾ “3-I Values for 3-P Model” to

9) See “가치 중심의 혁신을 위한 공공문화서비스의 가치와 거래 방식에 대한 새로운 인식을 제안 - 지역문화재단의 공공혁신을 중심으로” (김해보, 문화정책논총 제19집, 한국문화관광연구원, 2008). (Values-Centered Innovation : Proposal for a Recognitive Frame for Value and Trading Method of Public Cultural Service - Focus on Public Innovation of Local

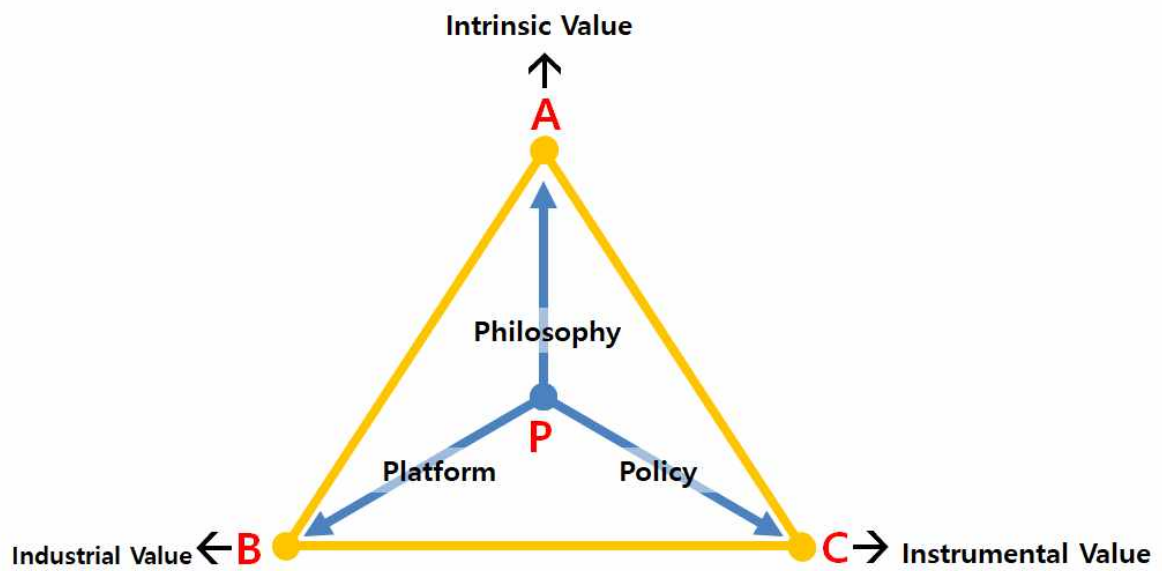
categorize the value of arts and culture into three dimensions: Intrinsic Value, Industrial Value, and Instrumental Value. **Here, Industrial Value refers to the value that generates direct economic profit. When combined with Instrumental Value, which is realized indirectly and over the long term, it is understood more broadly as Economic Value.**

I later developed this framework further into what I call the **<3-I Values of Culture for ABC model>**. In this version: **Artists & Academia** represent those primarily engaged with **Intrinsic Value** (the inherent and aesthetic worth of culture), **Business actors** are aligned with **Industrial Value** (market-based, monetizable aspects), and **Civic actors** (government and public institutions, and citizens) are concerned with **Instrumental Value** (social impact, indirect benefits). In this framework, Social Value is understood as the most comprehensive form of value, integrating both Intrinsic and Economic value (which itself includes Industrial and Instrumental value). As previously discussed in relation to the concept of Gyeong-Se-Je-Min(經世濟民), we can move beyond a narrow, price-based notion of economy. Instead of focusing solely on how much profit culture can generate(Industrial Value), we must include the Instrumental Value of culture: long-term, indirect, and social effects that shape people’s lives and communities. In this view, the social is economic, and the economic must also be social.

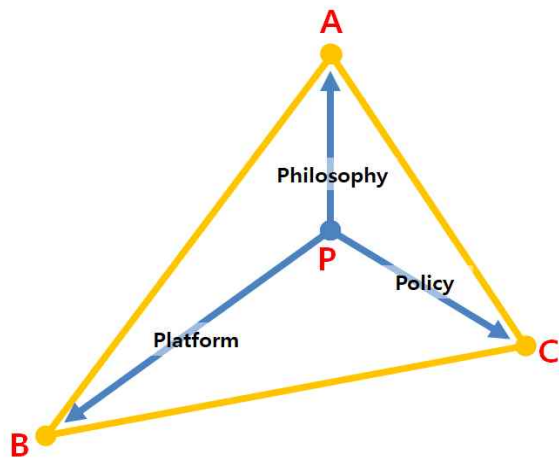
To capture the dynamics that influence both the volume and nature of cultural value exchange, I proposed an upgraded version: the **<3-I Cultural Values for ABC-P> model**. This extended framework introduces three P-factors—Platform, Policy, and Philosophy—that significantly shape how the A-B-C stakeholders perceive and transact cultural value. This is because the value of culture is not fixed; it is easily influenced by the values of actors and changes in external conditions such as technological developments. Platform refers to the venues and infrastructures (both online and offline, public and private) where cultural value is exchanged. Policy encompasses the regulatory and institutional systems that influence or govern actors’ behavior on those platforms. Philosophy reflects the worldviews, value systems, and ethical orientations that shape how each actor defines and evaluates cultural worth. Although all three P-factors affect each ABC stakeholder group, they have particularly strong pairings as below. Moreover, the 3-I ABC-P model, through its visual representation, helps us intuitively understand how the cultural ecosystem tilts toward one side depending on the relative strength of key control factors in cultural value transactions.

<3-I Cultural Values for ABC-P> Model				
by Hae-Bo KIM(2025)				
3-I Cultural Values			A-B-C Stakeholders	P-factors influencing stakeholders' perceptions and value transactions
Social Value (經世濟民)	Intrinsic Value		Artists & Academia	Philosophy
	Economic Value (經濟)	Industrial Value	Business	Platform
		Instrumental Value	Civic	Policy

Cultural Foundations)
10) “Cultural Value and the Crisis of Legitimacy” (John Holden, DEMOS, 2006)

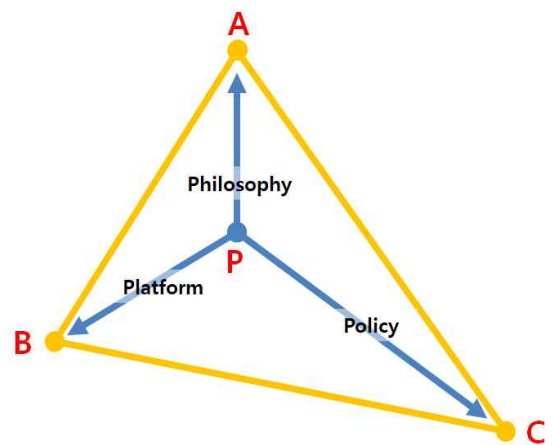


3-I Values of Culture for ABC-P
Balanced Cultural Ecosystem



AB'C-P Model

– An ecosystem dominated by Business



ABC'-P Model

– An ecosystem dominated by Government

(2) The Need to Focus on Intangible Elements

In his 2008 work, I (Hae-Bo KIM) proposed a simplified interpretation of the detailed components of the 3-I Cultural Values framework. Each value was paired with dual aspects: Intrinsic Value: Image – Story, Industrial Value: Cash – Credit, Instrumental Value: Development – Sustainability. At the time, the dominant tendency in cultural policy was to prioritize tangible elements—things that were visible, measurable, and rational. **However, with rapid technological advancement and shifting societal paradigms, attention has increasingly turned toward intangible components—those that are ambiguous or non-material, yet undeniably present and powerful.** If we apply the Eastern concept of Gi-Jeong (奇正) to this evolution, we might interpret what is already institutionalized and widely accepted as Jeong (正, tangible), while what remains uncertain or emergent as Gi (奇, intangible).

Crucially, these categories are not fixed. Over time, elements that were once Gi may become Jeong as they gain societal recognition and institutional legitimacy through technological and cultural change. **In this context, I propose updating the key elements of Instrumental Value particularly at the level of urban cultural policy. Previously framed as Development vs. Sustainability, they can now be reconsidered as: Competitiveness & Attractiveness.** While Competitiveness is typically assessed through rational indicators such as infrastructure, productivity, or GDP, and now regarded as a tangible factor, attractiveness – a more emotionally driven, emergent concept that has yet to be clearly defined or universally measured, thus qualifying as an intangible factor.

Cultural Values			Value Elements Offered by Arts and Culture and Their Changing Importance Over Time	
			Previously prioritized elements (Tangible)	Newly emphasized elements (Intangible)
Social Value	Intrinsic Value		Image	Story
	Economic Value	Industrial Value	Cash	Credit
		Instrumental Value	Competitiveness	Attractiveness ¹¹⁾

11) Previous models focused on Development (tangible) and Sustainability (intangible).

2. The DMZ(De-Monetization Zone) of Culture

(1) The Competition Among Big Techs to Construct Their Own Cultural DMZs

Are today's companies really focused on money in its traditional sense? In today's capitalist system, the key to business success has long since shifted from simply acquiring capital to moving the human heart. Capitalism has evolved to the point where not only goods and services but also information, experiences, preferences, and even identities are commodified and traded. **What is especially noteworthy is that many of these exchanges are no longer based on established, tangible values (Jeong, 正) or conventional currencies. Instead, they increasingly rely on intangible elements (Gi, 奇)—things that cannot be physically held, but are nonetheless recognized as valuable. I refer to this phenomenon as the <De-Monetization> of value exchange.** It marks a shift away from currency-centered transactions toward a broader spectrum of non-monetary exchanges, often facilitated through platforms created by Big Tech. On these digital platforms, goods and services rooted in intangible cultural value are now commonly traded using non-currency tokens such as loyalty points, digital membership tiers, or cryptocurrency—rather than cash. This shift not only redefines how culture is valued and exchanged but also highlights how emotions, attention, and symbolic resonance have become new forms of capital in the affective economy.

De-monetization of Value Transactions

= Use of non-currency tokens (intangible tokens)
+ Purchase behavior oriented toward non-monetary (intangible) values

<Demonetization trend of transaction tokens and its implications>

Non-Currency Trading	⇒ Trading with Currency	⇒ De-Monetized Trading	Implications of change	
Physical goods	Fiat Currency (legal bills, coins)	Local Alternative Currency (LETS, Time Dollars...)	Diversification of Value and Power	De-centralization
Credit	Central Bank Digital Currency (CBDC)	Credit Management System (membership, mileage...) Crypto-currency (Bitcoin, etc..)	Digitalization	

A recent news story reported that employees at OpenAI opposed the company's shift to a for-profit structure, leaving many readers puzzled—"Wait, weren't they already a for-profit company?" This reflects a broader shift in how value is perceived and exchanged in today's digital culture. For example, in the tech sector, a company's investment value is now more often determined by its daily active users (DAU) than by its actual revenue. Fans willingly pay for randomized idol photocards not just for the product itself, but to feel a sense of belonging to a fandom. In the NFT art market, irrational behavior

and emotional speculation drive transactions involving cryptocurrency. These are all examples of transactions taking place within what we might call a DMZ—De-Monetized Zone—a space where traditional monetary logic no longer fully applies. Big Tech companies are now racing to create their own DMZs through online platforms and digital currencies, seeking to control both the environment and the emotional flow of engagement. **Whether in an online site or a physical city, what truly matters now is the movement of the mind—the emotional pull that draws people across the many invisible DMZs embedded throughout our everyday lives.**

<The forms in which cultural values are traded and their recent changes>

Form & utility of Culture in Trading	Change in Presence of culture	Change in Characteristics of culture	Changes in Trading methods
	De- materialization	De- culturalization	De- monetization
Cultural Symbols	<div> <div>↑</div> <div>Digitization</div> <div>↓</div> <div>Institutionalization</div> <div>↓</div> <div>Artistic representation and symbolization</div> <div>↓</div> </div>	<div> <div>↓</div> <div>Paid Subscription Services</div> <div>↓</div> <div>Commoditization of culture</div> <div>↓</div> </div>	<div> <div>↑</div> <div>Spending for non-monetary value</div> <div>↓</div> <div>Using credit and new transaction tokens</div> <div>↓</div> </div>
Cultural Services			
Cultural Goods			

The de-monetization of value exchange is not only a sign of economic power decentralization, but also a reflection of value diversification in the digital age. Emerging technologies like blockchain, along with the growing influence of Big Tech companies—now more powerful than many nation-states—are fueling this shift. Add to this the rise of AI-driven personalized cultural services, which target individual tastes with increasing precision, and we see a rapid expansion of non-monetary, intangible forms of transaction. **This phenomenon aligns with broader civilizational shifts of the 21st century: the digitization of society has led to the “lightening” of the physical world, the erosion of centralized authority, and the multiplication of values—all contributing to a worldview that is increasingly decentralized and fluid.**

In the realm of cultural economy, this de-monetization trend is particularly pronounced. Cultural transactions have always been predisposed toward non-monetary value: emotional resonance, artistic credibility, and symbolic meaning are often more important than market price. Consider, for example, the earlier-mentioned NFT sale of the Hunminjeongeum Haerye, a Korean national treasure. **That case, like many others, shows how the de-monetization of cultural value exchange is accelerating through digital technology. This shift is accompanied by two interconnected phenomena: De-materialization: Cultural value becomes abstracted, institutionalized, and digitized. De-culturalization: Cultural goods are increasingly commodified and stripped of context.**

Contemporary models such as P2E (Play-to-Earn) subscription economies and the booming fandom

economy of K-Pop exemplify this new logic of cultural capitalism. In these systems, cultural value is no longer exchanged through legal tender alone. Consumers pay with: Credit (e.g. membership tiers), Loyalty (e.g. reward points or mileage), Emotional responses (e.g. likes or comments), Digital tokens (e.g. Bitcoin or NFTs). Likewise, what sellers offer is no longer just physical goods. Increasingly, cultural products take the form of intangible services or even symbolic subscriptions—such as access to exclusive digital experiences or identity-based community engagement. These trends are best understood through the lens of cognitive capitalism and its key mechanism: the Affective Economy. In this model, value is created not by scarcity or utility, but by attention, emotional labor, and affective resonance. As scholar Hangwoo Lee (2014)¹²⁾ described in his analysis of Google’s business model, this economy mobilizes and appropriates users’ emotional responses as productive labor.

<Types of DMZs Constructed by Big Tech Companies>

Key Elements of technology	How Decentralized Trading Works	DMZ deployment practices
Information Management of credit + Alternative tokens	Membership	Membership Services
	Mileage rewards	Airline miles, multi-level marketing...
	Recommendation	SNS, IOB Platform
	Credit-based transactions	Credit card
	P2E	Online games, subscription economy services...
	Fintech services	Kakao Pay, NAVER Pay...
	Crypto Digital Currency	Bitcoin, NFT...
	CyberMoney	various online game money
	Securities issuance	Department store gift certificates

One of the main reasons Big Tech companies are so committed to building these platforms is that the outcomes of de-monetized transactions can later be converted into monetized profit and capital. These non-monetary exchanges may not appear commercial on the surface, but they are often strategically designed for long-term monetization. Because this form of business looks less overtly commercial, it also faces less resistance when engaging with cultural value. It blends seamlessly into everyday life, embedding itself within people’s emotional, social, and symbolic routines. For instance, Google collects and analyzes users’ personal data for targeted advertising—yet proudly presents its “Google Arts & Culture” platform as a nonprofit cultural service. This strategic positioning allows companies to both benefit from emotional engagement and deflect criticism by emphasizing public or educational value.

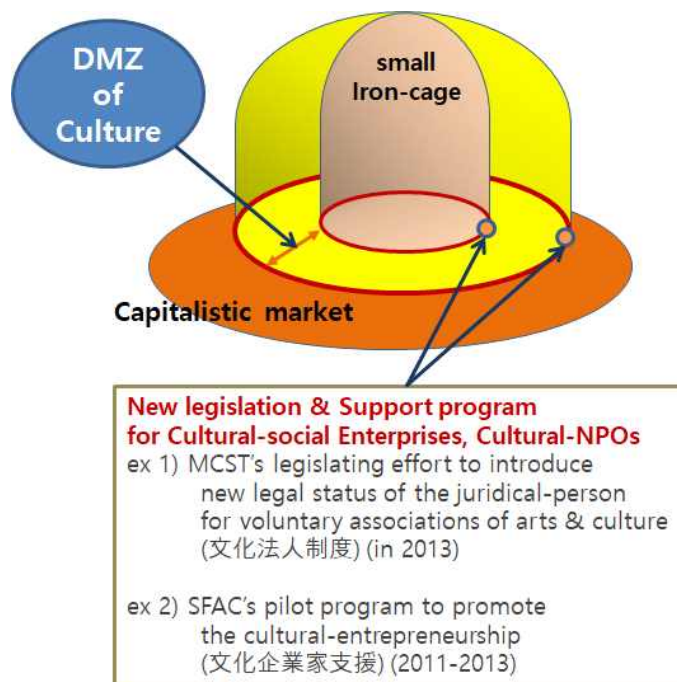
12) 구글의 정동 경제(Affective Economy) : 사용자 정동 노동의 동원과 전용(이항우, 경제와 사회, 비판사회학회, 2014) (Hangwoo Lee, “Google's Affective Economy: The Appropriation of Emotional Labor in Platform Capitalism”, Journal of Economy and Society, Korean Association for Critical Sociology, 2014)

(2) Creating and Protecting the Cultural DMZ as a Public Mandate

While Big Tech companies are actively creating De-Monetization Zones (DMZs) for cultural exchange, public institutions must not only impose rules on these spaces, but also establish and safeguard public DMZs of their own. This is a pressing task for cultural policymakers. At the Arts Council Tokyo Open Forum in 2015, I proposed the creation of a “Cultural DMZ” to facilitate smoother non-monetary cultural transactions.¹³⁾

Originally, the DMZ concept was intended as an institutional model to support cultural enterprises that pursue nonprofit goals but struggle to survive within the conventional market economy. Public policy must introduce new institutional mechanisms that establish such DMZs between public administration and market logic, enabling fluid transitions between nonprofit and for-profit modes of cultural value exchange.

<A Proposal for a Cultural DMZ to Support Cultural Enterprises Trapped in a JSA (Joint Security Area)>



(Source : Hae-Bo KIM(2015))

Cultural enterprises primarily deliver the value of culture to society through de-monetized transactions, largely supported by public subsidies. However, the non-monetary value of arts and culture is often undervalued, exploited, or entirely ignored within the logic of capitalist markets. Moreover, although subsidy programs typically require nonprofit operations, there exists no arts management system capable of adequately managing and integrating both non-monetary and monetary transactions simultaneously. As a result, many cultural services are offered for free, and cultural enterprises and arts organizations often face financial losses the more they engage in government-funded programs. Ironically, when they pursue nonprofit-driven goals such as social value and attempt to become self-sustaining, the financial records they report for subsidy programs become vulnerable to criticism from both sides. From a market perspective, such activities appear inefficient. From a public administration perspective, they are often viewed as inappropriate private profit gained through public

13) “A way to the Self-Revolution of Cultural policy to save the Community, Society and the Culture in Danger” (Hae-Bo Kim, Open Forum by Arts Council Tokyo, 2015.2.7.)

funding. **This double bind places cultural enterprises in a precarious position—akin to being monitored in a Joint Security Area (JSA) within the Korean DMZ, caught between opposing systems and constantly under scrutiny.**

As a proposed solution to these challenges, the idea of establishing a “Cultural DMZ” within cultural administration aims to introduce a new system within the public procurement and contract framework. This system would recognize not only the “social value” currently acknowledged under the Social Enterprise Support Act—such as job creation for vulnerable populations—but also the “economic and social dimensions” of the intrinsic value of arts and culture, particularly those aligned with the Gyeongsejemin (governing the world and benefiting the people) perspective. Such a system would allow these values to be appropriately reflected in pricing or revenue structures and could serve as a basis for evaluating cultural enterprise support programs and conducting cultural project financing assessments. Furthermore, by utilizing non-monetary trust tokens, such as cultural currencies, it would be possible to revitalize cultural service transactions beyond conventional currency systems (Kim Hae-bo, 2004)¹⁴).

Another essential role of public policy is to establish appropriate regulatory frameworks to ensure that traditional “Cultural DMZs”—which have long existed as spaces for the non-monetary sharing of culture—are not exploited for capital accumulation by Big Tech companies. **What we now need are new rules of the game that ensure the fair distribution of not only classical, monetized profits from cultural transactions, but also de-monetized forms of profit generated in the digital cultural economy.**

Such regulation must not inhibit the potential of Big Tech-led Cultural DMZs to serve as innovative platforms for cultural value exchange, but rather prevent them from becoming systems of affective exploitation¹⁵). If Big Tech companies are sincere in their claims of being “nonprofit in spirit,” they must help establish a system in which the profit gained through the trade of culture—an asset shared by society—is fairly redistributed back to human communities. In this regard, the example of France’s 2019 legislation on the so-called “GAFA Tax” (taxe sur les services numériques)¹⁶), and the EU’s Artificial Intelligence Act, which came into force in June 2023 with a strong emphasis on banning emotion-recognition AI¹⁷), are not only technically and culturally significant, but also offer important insights from an economic perspective.

While many people express concern over the monetization of culture trading through market transactions, what may actually warrant greater caution is the rise of de-monetized cultural transactions—a phenomenon often mistaken as “nonprofit,” but in fact driven by a new form of cultural capitalism. If Big Tech companies continue to profit from humanity’s shared cultural resources and human cultural activities without fairly redistributing the gains, then it is time to critically reexamine what they mean by being “nonprofit.”

14) “지역문화재단의 문화통화 도입 및 활용 방안 연구 : 서울문화통화를 중심으로” (Feasibility study on the cultural LETS as a new scheme for the cultural foundations : proposing a conceptual model for the Seoul cultural LETS) (김해보, 추계예술대학교 석사논문, 2004)

15) Google and Meta Hit with ₩100 Billion Fine for Illegal Collection of Personal Data (BBC News Korea, September 14, 2022)

16) “The Significance and Outlook of France's Digital Services Tax” (Tae-Hyun Oh, KEIP World Economy Focus, August 21, 2019)

17) EU AI Act: first regulation on artificial intelligence (News, European Parliament, 2023.6.14.)

3. <Emotional Economics> for Understanding Cultural Value Transactions

(1) Replacing the Demand–Supply Curve with a Satisfaction–Dissatisfaction Curve in Cultural Value Exchanges

When examining cultural transactions within De-Monetization Zones (DMZs), we find that price, as determined by traditional supply and demand curves, plays a relatively marginal role. For instance, in fandom economies—such as the sale of idol merchandise or high-end art auctions—we often observe demand increasing as price rises, which contradicts conventional economic logic. More importantly, in these cultural transactions, post-transaction behavior matters more than the moment of purchase itself. Whether or not the cultural market continues to grow hinges largely on how satisfied participants feel afterward. **This satisfaction depends heavily on the trust and emotional value attached to the intangible aspects of the exchange—and that, in turn, influences whether participants or observers will engage again.** To understand this, I have proposed a new framework: “Emotional Economics within the De-Monetization Zone(DMZ)”(Hae-Bo KIM, 2023)¹⁸⁾

Cultural goods, services, and symbols—often embedded in the 3-I Cultural Values framework—are accessed by users via trade tokens within various transaction platforms. These tokens fall into two broad categories: Tangible tokens: such as cash (denoted Y), and Intangible tokens: such as credit (trust, X) and time. For example, when buying a book, we may use not just money, but also discount coupons or loyalty points (credit). Attending a free public performance, like a street arts festival in Seoul, may not require cash, but we “pay” with time and emotional attention. If satisfied, we offer back trust—toward the event organizers, or even toward city policies or leadership of the mayor. We may also “pay” with personal data when registering for cultural information services.

Crucially, satisfaction does not result from the total value obtained, nor from the momentary affective emotion(情動) generated by the transaction. Instead, it is shaped by the gap between expectation and perception. When there is a positive surplus between what we believe we should have paid (in tokens) and what we actually paid, we feel satisfied. For example: If we pay 100 tokens, but later feel it was worth 110, we gain 10 tokens of psychological satisfaction. Conversely: If we believe 90 tokens would have sufficed, we experience a 10-token dissatisfaction. These differences typically arise from subjective assessments of intangible tokens, such as time and trust—not the relatively stable value of cash.

Assuming a high-volume market in which cash prices are relatively stable ($Y(t) \approx Y(o)$), we can derive: Satisfaction (S) from a cultural transaction as:

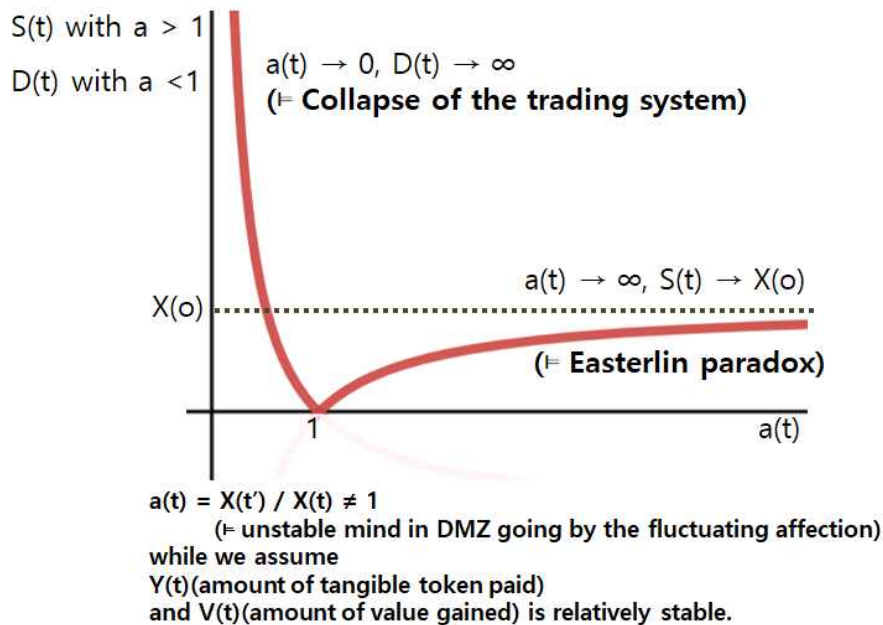
$$S(t) = \Delta X(t) \approx (1 - 1/a)X(o)$$

Dissatisfaction (D) as:

$$D(t) = \Delta X(t) \approx (1/a - 1)X(o) \quad (\text{See Appendix for full mathematical derivation.})$$

18) “Understanding of “Emotional Economics” in the “DMZ”(De-Monetization Zone) of Culture to go forward the “Cultural 經世濟民”(jīng shì jì mín) beyond the Cultural Economy” (2023 World Conference on Cultural Cities, 2023.10.16., Chengdu) (“문화의 탈화폐화 지대(DMZ : De-Monetization Zone)” 안에서의 “감정경제학” : “문화경제(cultural economy)”를 넘어 “문화경세제민(Cultural 經世濟民)”으로 나아가기)

<The Satisfaction–Dissatisfaction Curve of Emotional Economics>



When plotted as a graph, this equation forms a bird-beak-shaped curve, bending at the point where $a = 1$, which represents emotional equilibrium. When $a(t)$ approaches infinity—signifying a rise in favorable and positive affect— $S(t)$, or satisfaction, increases, but eventually plateaus and converges toward $X(o)$. Conversely, when $a(t)$ drops below 1 and approaches zero—indicating a rise in negative affect— $D(t)$, or dissatisfaction, diverges toward infinity. At this point, the transaction system collapses and ceases to function. **We may refer to this as the Satisfaction–Dissatisfaction Curve in De-Monetized Transactions.** Since $X(o) = V(o) - Y(o)$, if the transaction is made using 100% credit tokens with no cash payment, $X(o)$ represents the total perceived value acquired. The variable $a(t)$ is influenced by fluctuating emotions and can rise toward infinity, but in accordance with human nature, it eventually returns to a state of emotional balance over time. However, no matter how high the positive affect becomes, $S(t)$ —the sense of satisfaction from the transaction—never exceeds the intrinsic value $V(o)$. Furthermore, as $a(t)$ increases, the rate of increase in $S(t)$ diminishes, illustrating a decreasing marginal return in emotional satisfaction.

(2) From Understanding Fandom Economy to Innovating Public Cultural Services

This model helps us understand the evolving logic of cultural value exchange in today's affect-driven capitalist market. In contrast to the product-based capitalism of the past, today's culture economy centers on: Symbolic consumption of goods, The affective responses they generate, and The subjective satisfaction that follows. These factors now determine not only whether a transaction is completed, but whether it leads to sustained relationships and future engagement. **The resulting satisfaction–dissatisfaction curve offers a conceptual foundation for what may be considered a new cultural economics—one grounded in the dynamics of Emotional Economics operating within De-Monetization Zones (DMZs).**



<Random photo cards for idol fandom>



Overall Stats

Current Lowest Price Punk Available
44.95 ETH (\$69,688.23 USD)

Number of Sales (Last 12 Months)
1,760

Total Value of All Sales (Lifetime)
1.04M€ (\$2.63B)

Value of Sales (24 Hours)
96.50€ (\$149.11K)

Value of Sales (Week)
847.16€ (\$1.34M)

Value of Sales (4 Weeks)
4.92K€ (\$8.01M)

Top Punk Owners

All Punk Types and Attributes

Largest Sales

See all top sales



#5822
8KE (\$23.7M)
Feb 12, 2022



#7804
4.2KE (\$7.57M)
Mar 11, 2021



#3100
4.2KE (\$7.58M)
Mar 11, 2021



#2924
3.3KE (\$4.45M)
Sep 28, 2022



#4156
2.69KE (\$3.31M)
Jul 15, 2022



#5577
2.5KE (\$7.7M)
Feb 09, 2022

<NFT artwork list on the CryptoPunks homepage>

*"...the emergence of a market for something
that hasn't been possible to value before: emotion."*

(Noelle Acheson, 2021)¹⁹

In recent years, we have seen increasing attempts to burn physical artworks and replace them with digital NFTs, presenting the latter as the sole original in order to drive up their market value²⁰). These transactions are fueled not by material worth, but by emotional responses to the virtual event. The resulting price is often determined by the affective resonance, not the object itself. **As Noelle Acheson remarked: "NFTs have created a market for something that couldn't be valued before: emotion."** This dynamic illustrates a key feature of de-monetized cultural transactions and the Affective Economy: a space in which emotions become units of value, and where intangible experiences are monetized through non-currency tokens, such as cryptocurrencies. Fandom economies represent a parallel phenomenon. Within these communities, cultural value is traded through non-monetary means, leading to the consolidation of loyalty, belonging, and symbolic capital. Fandom thus becomes an independent economic system driven by emotional investment rather than monetary exchange.

The conceptual framework of Emotional Economics provides a useful lens for understanding such exchanges—especially those involving invisible, price-less assets. For instance, the previous model analyzed satisfaction in terms of trust (X) and cash (Y) as intangible and tangible tokens, respectively. If we substitute time (T) for trust, we can better understand how citizens willingly "pay" with time when lining up for free cultural events. Their time becomes an intangible token of value. This analytical shift allows us to assess how much non-monetary commitment people are willing to make, and how much satisfaction they derive in return—offering a new model for designing and evaluating public cultural services for the innovation.

19) Crypto Long & Short: What NFT 'Markets for Emotion' Say About Tech Business Models (Noelle Acheson, CoinDesk, 2021.5.15.)

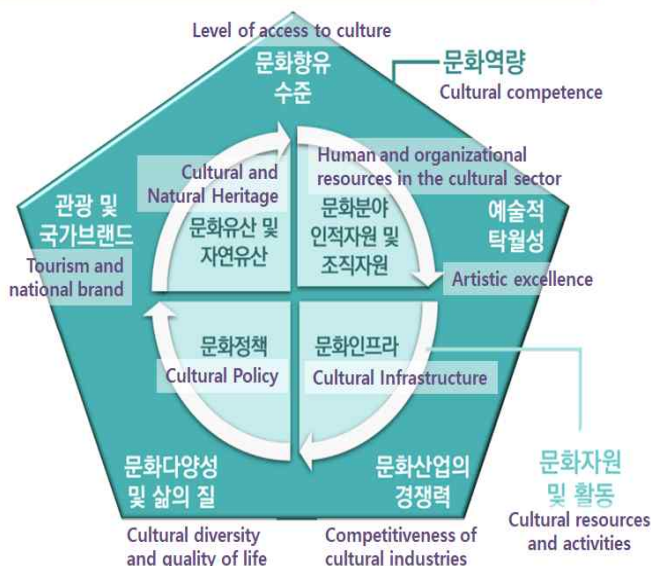
20) Banksy Work Physically Burned and Digitized as NFT in Art-World First (Jamie Crawley, COIN DESK, 2021.3.4)

(1) Shifting from Global Competitiveness to Locally Rooted Cultural Attractiveness

In the previously introduced <3-I Cultural Values for ABC-P> model, **two core elements of the instrumental value of culture—particularly relevant for urban cultural policy—are urban competitiveness and urban attractiveness.** These can be considered intangible not only because attractiveness is not based on the level of infrastructure or rational judgment, but also because it is an emerging policy concept that has yet to be fully defined.

Traditionally, culture's contribution to urban competitiveness has been understood in terms of attracting creative populations and tourists, as well as enhancing the overall quality of life for residents. **However, with locality increasingly recognized as a key regional asset, a new policy discourse is gaining momentum—one that seeks to understand competitiveness not through global standards but through a region's unique cultural attractiveness.** Reflecting this shift, the OECD proposed a Regional Attractiveness Index (Measuring the Attractiveness of Regions, OECD, 2022) as a critical tool for regional recovery in the post-COVID era—moving away from competitiveness-based models. Similarly, Korea's Ministry of Culture, Sports and Tourism has also launched a research initiative titled "Research on the Development of Global Culture Index for Sustainable Cultural Attractiveness"(Hye-won Yang. et al., KCTI, 2023) to systematically manage the nation's cultural attractiveness as a policy priority. In response to Korea's pressing issue of rural decline, the Presidential Committee for Decentralization and Balanced Development has also undertaken a study titled "Research on Strategies to Enhance Regional Attraction and Vitality through Locality & Culture"(Hae-Bo KIM et al., Presidential Committee for Decentralization and Balanced Development, 2024) comparing existing indicator systems and proposing alternative metrics for regional vitality focused on attractiveness and vibrancy.

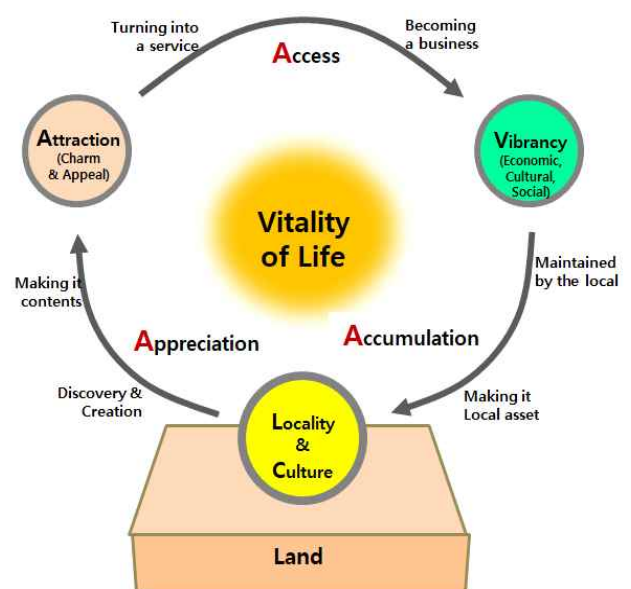
Framework for the Global Culture Index system
Toward a Sustainable Cultural Attractiveness



(source : Hye-won Yang. et al., 2023)

Cycle of Locality-Culture-Attraction-Vitality

(source : Hae-Bo KIM et al., 2024))



Local Vitality = Vitality of Land + Vitality of Life

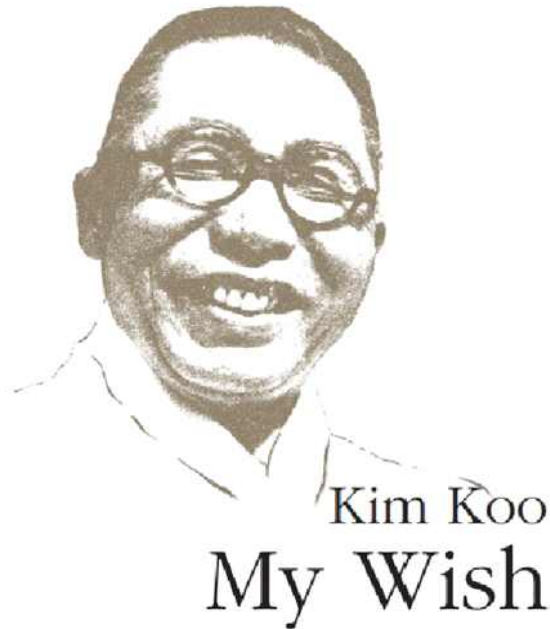
Growing interest in attractiveness is closely tied to recent social trends. In today's world, where many are exhausted by constant competition, a new value is emerging: the "Power of the Harmless" (Muhaeryeok, 無害力). **We are living in a time when the power to be loved—attractiveness—is becoming more influential than the power to win over others—competitiveness.** Considering the dynamics of the affective economy discussed earlier, it is likely that people will be drawn not to cities that are merely livable, but to those that are truly lovable. This is why the essential cultural question of our time may be: How can we become more lovable to one another? Exploring this question is not just a matter of sentiment—it is a cultural strategy for living together in a more connected and human-centered society.

		from a Competitive City		to an Attractive City
People	Citizens		Where will they be more drawn to?	
	Talents			
	Visitors			
Money	Invested capital			
	Consumer spending			
Footsteps	Online traffic			
	Offline visits			
Affections	Rational minds			
	Empathetic hearts			

When tracing the roots of the Korean Wave's success, we must look beyond President Kim Dae-jung's strategy for enhancing national competitiveness in the information society, and turn to the visionary insight of Baekbeom Kim Gu, who was far ahead of his time. As the president of the Korean Provisional Government during an era when the Republic of Korea even had not yet fully established itself as a modern state, Kim Gu expressed his ideals in My Wish, writing:

"I want our nation to become the most beautiful in the world... The one thing I desire above all is the power of a refined and elevated culture."

While President Kim Dae-jung laid the groundwork for Korea's cultural ascent by building the internet infrastructure essential for the century of culture, Kim Gu envisioned a future where a nation's attraction—its power to be loved—would become central, and offered a philosophical foundation for a culture-driven nation.



"I wish for our nation to become the most beautiful nation in the world. ... The one thing I seek in infinite quantity is the power of a highly developed culture."
 — Kim Koo, President of the Korean Provisional Government, *My Wish* (1947)

Even before the state was fully established, Kim Koo envisioned Korea as a culturally rich and lovable country.

(Source : Kim Koo Foundation Official Website)



President Kim Dae-jung laid the groundwork for national competitiveness in anticipation of the information era.

(Source: Hankyoreh Newspaper, January 3, 2024)

(2) Investing in Cities as Platforms for Intangible Cultural Attraction

In response to these shifting dynamics, urban cultural policy must now invest not in globally standardized competitiveness, but in locally grounded cultural attractiveness. This is precisely why the Seoul Foundation for Arts and Culture is conducting a research project this year on the development of a World Cities Attractiveness Index. **By focusing on urban attraction & charm rather than urban competitiveness, this research seeks to broaden the focus of urban policy—from an economy-centered approach to one that prioritizes culture and locality. We also hope that cultural policy itself will evolve beyond the boundaries of arts and culture to embrace a new paradigm—one that centers on local identity and empathetic humanity, rooted in locality.**

The concept of attractiveness (魅力)—the force that draws in investors, visitors, creative talents, residents, and Relationship-Based Populations—is not something that can be fully captured through rational definition alone.

Rather than trying to fix its meaning too rigidly, it is more important to participate in shaping a global discourse that shifts from competitiveness to attractiveness, and to select, share, and manage the key elements of urban charm as a matter of public policy.

This study emphasizes not only the power to attract from the outside (appeal) but also the inner, embedded qualities (charm) as essential elements of urban attractiveness. We aim to examine a wide range of urban resources and activities that contribute to a city's **Living Conditions, Unique Locality, sense of Playfulness, and capacity for empathy**. The perspectives of four co-authors—an urban competitiveness expert, an economist focusing on the charm of alleyways, a sociologist specializing in empathy, Hallyu, and urban scenes, and a cultural policy specialist—are thoughtfully integrated into this research. Importantly, this study recognizes not only tangible resources such as cultural infrastructure, but also the buzz generated by people's cultural participation and everyday engagement, as key components of urban charm. We expect that, through the process of identifying a city's attractiveness assets, the significance of arts and culture will become even more pronounced.

<Initial Conceptual Framework for the World Cities Attractiveness Index>

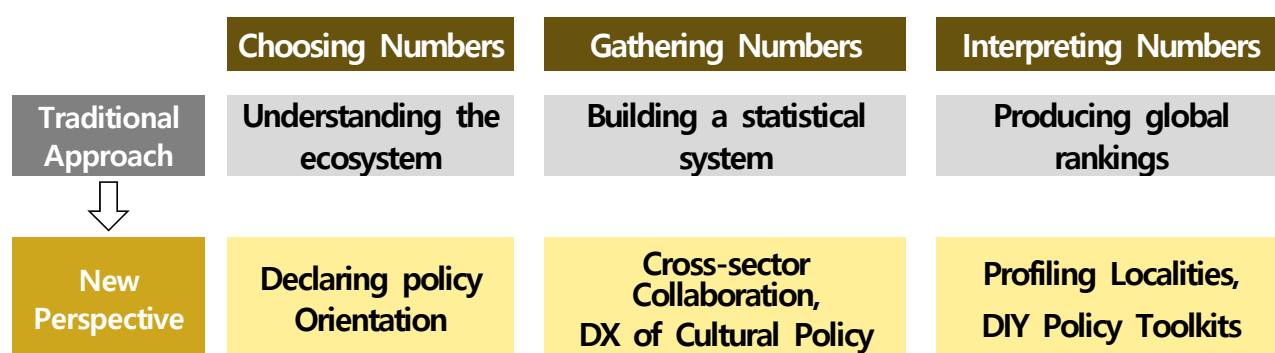
Concept of City Attraction			= The power to attract Investors, Visitors, Relationship-based populations, Creative talents, and Residents = Inner charm (inherent value) + Outer appeal (magnetic force) = Tangible assets + Intangible resources				
Elements of Attraction (to be consulted)			Target Groups to Attract				
			Investors	Visitors	Relationship-Based Populations	Creative Talents	Residents
Attraction	= Charm + Appeal	Living Conditions	Economic Prosperity (GRDP growth rate, Startup ecosystem index, etc)				
			Housing Stability (Housing cost burden, Housing supply rate, etc)				
			Jobs and Opportunities (Youth employment rate, Number of creative industry firms, Cultural industry export volume, etc)				
			Social Environment & Quality of Life (Participation rate in higher education, Quality of healthcare and welfare services, Urban green coverage ratio, etc)				
		Unique Locality	Distinct and Authentic Local Assets (UNESCO heritage sites, Hip commercial alleys, Cultural heritage resources, etc)				
			Cultural and Artistic Resources (Density of cultural infrastructure, Vibrancy of the arts ecosystem, etc)				
			Diversity of People and Culture (Proportion of foreign residents, Cultural diversity index, etc)				
			Geographic Connectivity (Accessibility, Transport infrastructure, Number of annual visitors, etc)				
		Playfulness	Cultural Events and Artistic Projects (Arts festivals, Public art initiatives, etc)				
			Nightlife and Street Culture (Outdoor cultural events, Nighttime cultural offerings, Public safety levels, etc)				
			Tourism Resources and Infrastructure (Number of international events hosted, Accommodation capacity, Average length of stay, etc)				
			Civic Cultural Participation (Levels of citizen engagement in cultural activities, Cultural consumption expenditure per capita, etc)				
		Empathy	Expressed Attraction(Buzz) (Volume and sentiment of Digital buzz on travel platforms, etc)				
			Evaluated Attraction (Recognition by major media outlets, Awards and honors received, etc)				
			Visitor Satisfaction (Tourist satisfaction ratings, Business engagement satisfaction, etc)				
			Resident Satisfaction (Quality of life ratings, Level of social trust, etc)				

Developing an indicator system is not simply a matter of producing yet another set of numbers. Each indicator chosen represents a policy orientation, and the introduction of new indicators reflects a shift in perception. Moreover, the process of collecting various data points that make up the indicator system becomes an opportunity to establish collaborative channels between cultural policy and other areas of public policy. Rather than managing the collected numbers solely as statistics, they can be delivered as cultural information services for citizens. We hope this entire process will contribute to the

expansion of the cultural policy domain and its digital transformation (DX). As a final outcome of this research, we aim to build an online platform that not only shares the data but also supports profiling of attractiveness at the urban scene level.

In particular, considering that Seoul's overall attractiveness can only be derived by aggregating statistical data from each local district (gu), we see the data collection process itself as a form of policy collaboration with local actors. **Our goal is to provide a so-called DIY Policy Toolkit that helps each of Seoul's 25 districts(gu) formulate their own cultural strategies based on locally defined attractiveness characteristics. Since attractiveness is inherently grounded in diversity, the urban attractiveness index should not become yet another global ranking system that aligns cities according to a single standard.**

<Beyond Metrics: A New Cultural Policy Perspective on Numbers>



Attractiveness is recognized through the movement of the human heart. It becomes embedded in digital images and stories, drifting through virtual space, and is continually reproduced through people's emotional responses. As mentioned earlier, Big Tech companies are now racing to build massive, energy-consuming data centers in order to capture these fleeting fragments of affect. We now live in smart cities, where nearly every aspect of daily life is digitally twinned, monitored, and managed. As we grow accustomed to the convenience offered by machines—systems that think faster and deeper than we do and now generate culture themselves—we risk losing the very human capacities our ancestors passed down to us. This includes our capacity to create culture. The cultural productivity of artificial intelligence is now rapidly outpacing that of human beings. **In light of this, we must ensure that the affective buzz generated by real, embodied humans does not remain confined to the De-Monetization Zones (DMZs) of corporate platforms. Instead, it must resonate through the public squares of our cities.**

Culture and the arts have the power to embody the intangible charm of localities. The city, in turn, becomes a vessel—a platform that holds the diverse expressions of empathy across difference. And to carry such a variety of beauty, a wide, shallow dish is more appropriate than a narrow-necked bottle. Just as a salad bowl is designed to hold a blend of ingredients and dressing, so too must the public square of the city hold the steps and stories of people moved by shared beauty and emotion. This is the vision behind Seoul's new direction for cultural investment. **This reflects Seoul's new direction in cultural investment—to become a platform that embodies and amplifies urban attractiveness. The research project on developing the World Cities Attractiveness Index, which represents this new investment orientation, will proceed according to the following timeline. We warmly welcome the interest and support of cultural policy experts around the world.** (sea@sfac.or.kr)

Tentative Timeline for the World Cities Attractiveness Index Development Project

◆ Phase 1: Initial Consensus and Conceptual Exploration

By June (or July) 2025; Online workshop with international collaborators

with goal of Building shared understanding on the need for developing an urban attractiveness index

By October 2025; Survey on concepts of urban attractiveness, perceptions of Seoul's charm

to prepare discussion materials for the on-site workshop in November

◆ Phase 2: On-site Workshop & International Forum in Seoul

November 2 (Sun) – November 5 (Wed), 2025; Joint Research Workshop in Seoul on Attractiveness

- Four themed field tours exploring Seoul's Attraction: History & Nature, Arts & Culture, Hip Authenticity, Resonant Diversity
- City Attractiveness Workshop: Exploring the concept of attractiveness, its policy implications, and sharing relevant case studies
- Participation in the International Cultural Exchange Networking Workshop (in cooperation with KOFICE)

(If this program is not selected as a WCCF Leadership Exchange Programme, a smaller-scale workshop will be held with invited international forum speakers and research partners.)

November 4 (Tue), 2025; Seoul International Culture & Arts Forum

- @DDP / with the draft theme: **"The Future of Humanity, Arts, and the City"**
- The program will consist of thematic sessions, arts sessions, and policy sessions, with distinguished figures from the cultural and artistic sectors as well as policy experts.
- Interim presentation of research findings, Sharing of urban attractiveness case studies

(In addition to presenting at the forum, international participants will be invited to join the "Joint Attractiveness Workshop" (November 2–5), which includes site visits and discussions with Korean co-authors and research team.)

◆ Phase 3: Data Collection System Design and Pilot Survey

By January 2026; Release of the Proposed Framework for the World Cities Attractiveness Index

By December 2026; Pilot survey and comparative analysis among partner cities

- ~ March 2026: Research findings to inform the revision of the Seoul Cultural Indicators System
- ~ August 2026: Data collection under the revised system
- ~ September 2026: Comparative analysis of pilot survey and index data across cities
- ~ October 2026: Presentation of research outcomes at the WCCF Summit

✉ **Please contact Hae-Bo Kim (Advising Director, Policy & Strategy Division, Seoul Foundation for Arts and Culture (SFAC))** ✉ sea@sfac.or.kr

Derivation Process of the Satisfaction–Dissatisfaction Curve in Emotional Economics

We put

$Y \equiv$ Cash (or tangible token) paid

$X \equiv$ Credit paid

$T \equiv$ Time paid

$P \equiv$ Total Tokens paid

$= \{\text{Tangible tokens, Intangible tokens}\}$

$= Y + X + T$

$V \equiv$ Total Values gained

$= \{\text{Intrinsic value, Industrial value, Instrumental value}\}$

$= \{\text{Image, Story, Cash, Credit, Development, Sustainability}\}$

When the trade is sealed

$V(t) = P(t)$

$= Y(t) + X(t) + T(t)$ ²¹⁾

To acquire the tangible or intangible values of a culture, we pay intangible tokens like credit and time as well as tangible tokens like cash. The acquired values of culture include images, stories, cash, credit, development, and sustainability in the forms of physical goods or services, or in cultural symbol. For example, we pay not only money to buy a book at a bookstore, but we also pay a portion of the book price with discount coupons or miles we receive when we sign up for a membership. We don't pay cash to enjoy cultural life by attending a free street art festival in Seoul, but when we take the time to do so and get a reasonable level of satisfaction, we show our trust in the organizers of the event and our support for the city's cultural policies or the mayor of Seoul who authorized it. Or we provide our personal information and sign up to be a member of the city's cultural information service.

Just like the 3-I of values, those are "Tangible" and "Intangible," the payment token that closes the transaction can also be categorized into tangible and intangible tokens. Tangible tokens include Cash($\rightarrow Y$), while intangible tokens include Credit($\rightarrow X$) and Time($\rightarrow T$). In the past, the intangible credit token was a non-monetary token such as a word of appreciation or a "letter of credit" that was used as the basis for facilitating a transaction. Nowadays, it's more common for a formal payment of a certain amount of Credit token($X(o)$) to reduce a Cash payment ($Y(o)$). Examples include offering a price reduction in exchange for a new membership, reducing the installment price of electronics based on a promise to spend a certain amount on a card in the future, or substituting accumulated loyalty miles for a portion of a cash payment. When a trade is completed, the total amount of tokens paid must equal the value elements acquired by the trade participants to be recognized as a fair trade. Participants determine the amount of tokens to pay based on their values, using the market price as a reference.

21) There are other unnecessarily wasted overhead costs in real cultural service transactions. Kim (2008) includes them as α and analyzes them as " $V = P = Y + X + T + \alpha$ ", but we omit them for simplicity.

for the simplicity, T is included in X(~intangible token) and put

$$V(o) = X(o) + Y(o)$$

$$V(t) = X(t) + Y(t)$$

(total amount of value purchased with credit(intangible) tokens and cash(tangible) tokens)

put

$$a = a(t)$$

$$\equiv X(t') / X(t)$$

(Emotional factor that drive the valuation of the amount of tokens paid out immediately after a transaction at t.)

while $Y(t') \cong Y(t) \cong Y(o)$

(as the token system is established and the valuation on it is stable)

$$X(t') = aX(t)$$

(the subjectively assessed amount of paid token fluctuates right after $t(\sim t')$)

if seen being rational

(going by the established price in the conventional market)

$$a(t') = a(t) = 1$$

(it means the stable mind(恒心) on rational market)

if seen being emotional

(in the DMZ going by the fluctuating Affection)

$$a(t') \neq a(t) \neq 1$$

(it means unstable mind in DMZ of Culture)

Let's apply an Eastern perspective here and bring the mind into the equation.

The tangible token $Y(t)$, which reflects the price in cash that reflects the rationality of general people, changes very little and is relatively "stable". The intangible token $X(t)$, on the other hand, is very unstable because the subjective assessment of the amount of the token paid ($X(t)$) varies constantly making a difference from the actual amount, reflecting the emotions of satisfaction, pride, dissatisfaction, or regret about the transaction at time t . The rational mind, or "general mind", which reflects the average value of the minds of many people in the market, should have $a = 1$. In other words, if you have the same mindset going into a market transaction, your assessment of the amount of tokens paid shouldn't change before or after the transaction closes. This is similar to the Eastern concept of "constant mind(恒心)". However, in practice, especially in transactions that take place in cultural DMZs, $a(t') \neq a(t) \neq 1$, and $a(t)$ is very unstable.

if we define

$S(t) \equiv$ Satisfaction with the result of trade at t

$D(t) \equiv$ Dissatisfaction with the result of trade at t

$S(t) \neq a(t)$

(Fluctuating affection may result in some Happiness, but does not mean the Satisfaction.)

or

$S(t) \neq V(t)$

(Total value gained by the trading does not assure the Satisfaction.)

but

$S(t) = \Delta X(t)$

(subjective gain of paid intangible token at the trade of t , with $Y(t) \cong Y(o)$)

We calculate the satisfaction gained from this transaction as $S(t)$ and the dissatisfaction as $D(t)$. The mental satisfaction that results from a transaction is not determined by the total amount of the value gained or the emotions that arise immediately after the transaction. Rather, satisfaction is the difference in perceived reality compared to what was initially expected.

For example, if you actually paid 100 tokens in a transaction that just took place, but based on your emotions immediately after the transaction, you assess that the appropriate amount of tokens that should have been paid was 110, your satisfaction is the difference, or the gain of 10 tokens (= 110 tokens - 100 tokens). Conversely, if you feel bad about the outcome of the transaction and think "I could have paid 90 tokens...", your dissatisfaction is 10 tokens. This gain or loss is largely determined by a subjective assessment of the appropriate amount of intangible tokens. This is because the subjective assessment of how much intangible tokens to pay for, which is not the same as the assessment of how much tangible tokens, which have a relatively stable price, fluctuates based on emotions. This is how our emotion affects the result of the transaction.

$$\begin{aligned}
S(t) &= \Delta X(t) \text{ (subjective gain of paid intangible token at the trade of } t, \text{ with } Y(t) \cong Y(o)) \\
&= X(t') - X(t) \text{ (with } a > 1 \text{)} \\
&= (1 - 1/a)X(t') \\
&\approx (1 - 1/a)(V(o) - Y(o)) \\
&\approx (1 - 1/a)X(o)
\end{aligned}$$

$$(\because V(t') = X(t') + Y(t'))$$

$$X(t') = V(t') - Y(t')$$

$$\approx V(o) - Y(o)$$

(if we assume relatively stable V and Y)

$$\text{if } a(t) \rightarrow \infty, S(t) \sim X(o)$$

(Satisfaction converges to X(o))

$$\begin{aligned}
D(t) &= \Delta X(t) \text{ (subjective loss of paid credit token at the trade of } t, \text{ with } Y(t) \cong Y(o)) \\
&= X(t) - X(t') \text{ (with } a < 1 \text{)} \\
&= (1/a - 1)X(t') \\
&\approx (1/a - 1)(V(o) - Y(o)) \\
&\approx (1/a - 1)X(o)
\end{aligned}$$

$$\text{if } a(t) \rightarrow 0, D(t) \rightarrow \infty$$

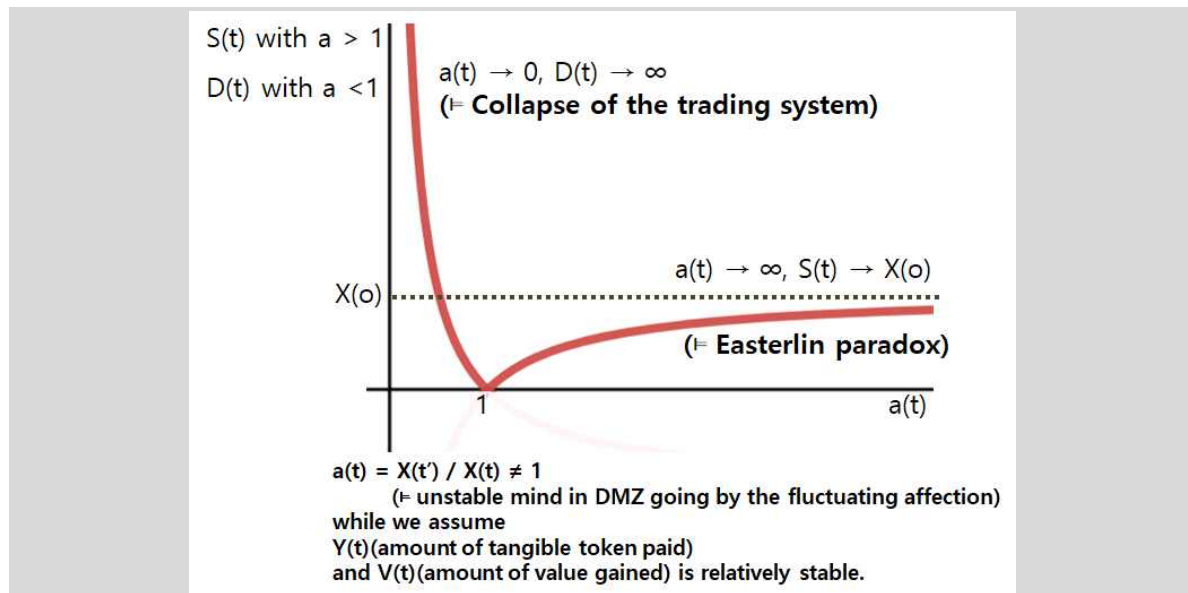
(Dissatisfaction diverges to ∞ and the system collapses)

If $Y(t) \cong Y(o)$, i.e. the value of the tangible token is stable, then the satisfaction gained from trading the value of culture in a market becomes

$$S(t) = \Delta X(t) \approx (1 - 1/a)X(o).$$

Conversely, if we calculate the dissatisfaction from this trade, we get

$$D(t) = \Delta X(t) \approx (1/a - 1)X(o).$$



If we graph the formula, we get a bird's beak-shaped curve that bends around $a = 1$, as shown here. As $a(t)$ goes to infinity (∞), $S(t)$, or satisfaction, converges to $X(o)$.

On the other hand, as $a(t)$ less than 1 goes to zero, $D(t)$, or dissatisfaction, diverges to infinity (∞).

We can call this the "Satisfaction-Dissatisfaction Curve in Demonetized Transactions".

Since $X(o) = V(o) - Y(o)$, this is the sum of the value gained if no cash was paid and 100% of the transaction was paid in intangible credit tokens. $a(t)$ can grow to infinity because it is subject to fluctuating emotions, but $S(t)$, or the satisfaction gained from the transaction, will never exceed the original value $V(o)$ and will stop to increase as $a(t)$ grows to the infinity²²⁾. This is analogous to the phenomenon of taking a drug and having your mood swings go to infinity, but the satisfaction you get from it doesn't keep increasing.

22) The variable $a(t)$ represents an emotional state that may spike temporarily and then naturally return to equilibrium over time. This natural decay rate varies from person to person. On the other hand, when external emotional stimuli are repeatedly introduced over time, $a(t)$ evolves depending on the intensity of the stimuli and an individual's sensitivity to them.

This process can be expressed with the following equation:

$$da(t)/dt = -\lambda(a(t) - 1) + \beta E(t)$$

Where:

λ (lambda) = natural emotional decay rate (stability tendency)

β (beta) = sensitivity to external stimuli

$E(t)$ = intensity of external event/stimulus at time t

By default, $a(t)$ tends to converge toward emotional equilibrium ($a = 1$) over time. However, when external stimuli such as content updates, social evaluations, or additional rewards occur, they disrupt that convergence and cause $a(t)$ to fluctuate again.

This model can be used to simulate the emotional dynamics of cultural transactions. For example, by identifying emotional stimulus factors at different time points during cultural events—such as an idol concert—we can simulate how $a(t)$ affects the satisfaction-dissatisfaction curve in cultural value exchange. This insight can then be applied to fandom management strategies.