The Polarization of NFTs: Association between Personality Traits and Perceived Value

Xinyi Yang
Gamification Group
Research Centre of Gameful Realities
Tampere University
xinyi.yang@tuni.fi

Nannan Xi
XR Economies Lab
Research Centre of Gameful Realities
Tampere University
nannan.xi@tuni.fi

Juho Hamari
Gamification Group
Research Centre of Gameful Realities
Tampere University
juho.hamari@tuni.fi

Abstract

The rise of Internet 3.0, the metaverse, and virtual realities is accelerating the shift from a physical economy to one that is digital, decentralized, and globally accessible. While the benefits and detriments of virtual assets like non-fungible tokens (NFTs) have received attention, individuals' opinions about them remain polarized. This study investigates how personality traits shape users' perceived value of NFTs. Using survey data from 805 respondents, we examine how the Big Five traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) are associated with 14 value dimensions spanning technology, art, and product aspects. The findings indicate that perceptions of NFTs vary among users. Of note, individuals high in agreeableness and conscientiousness perceive NFTs more favorably across the spectrum of value dimensions, whereas those high in neuroticism exhibit opposite tendencies. Extraverted individuals are drawn to the subjective norms and financial gains related to NFTs, while those high in openness value their information transparency.

Keywords: Metaverse, FinTech, virtual assets, personality traits, value perception.

1. Introduction

The rapid advancement of technologies such as wearable devices, cloud computing, and 6G is accelerating the convergence of the physical and virtual worlds. This transformation is reshaping how individuals interact, communicate, and engage in daily activities. Central to this shift is the metaverse – an interconnected ecosystem of virtual environments that supports work, socialization, play, and economic exchange, together with an emerging virtual economy. A core element in this transformation is blockchain technology, which enables new modes of digital ownership via non-fungible tokens (NFTs). Unlike traditional digital content that can be endlessly copied, NFTs offer verifiable ownership and authenticity of virtual assets. The NFT market surged in 2021–2022 across art, gaming, and entertainment (Statista, 2025), then entered a more volatile phase influenced by macroeconomic shifts, regulatory uncertainty, and changing public interest (Giri et al., 2025).

This volatility reflects a deeper polarization in public attitudes toward NFTs and virtual assets more broadly, where similar technical affordances may provoke divergent value appraisals. Supporters may praise their potential to revolutionize product ownership, empower creators and developers through direct monetization, and open novel investment opportunities (see e.g., Griffiths et al., 2024; Peres et al., 2022; Wang et al., 2021). In contrast, critics may warn of speculation, scams, weak regulation, and environmental costs (see e.g., Peres et al., 2022; Vuong et al., 2018; Wang et al., 2021).

Such divergence raises a critical question: Why do individuals perceive NFTs so differently? Individual differences, particularly personality traits, can offer a theoretically grounded explanation. Personality has the capacity to shape perceptions of value, utility and risk in various contexts such as consumption and investment (Marbach et al., 2016; Xi et al., 2024; Zuckerman & Kuhlman, 2000). In cutting-edge product categories, where user knowledge is limited, these relatively stable

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traits are likely to guide initial evaluations before deeper market learning occurs. For example, individuals high in openness may be drawn to the novelty and aesthetics of NFTs, while those high in conscientiousness may prioritize security. These preference differences can help explain such polarized appraisals of NFTs. When product values misalign with user traits, confusion and distrust may intensify, increasing market volatility. Recognizing these dynamics is therefore essential for developing and promoting NFTs and other cutting-edge products, ultimately contributing to the stability and growth of the metaverse and virtual economy.

Yet, despite its relevance, the role of personality in NFT evaluation remains underexplored (Alkhudary et al., 2023; Cho et al., 2024; Xie et al., 2024). Existing studies often treat NFT users as homogeneous, or focus on cultural orientation (Sung et al., 2023), value expectations (Griffiths et al., 2024), or demographics like age and income (Ng et al., 2025). One recent work links personality to investment value (Luo et al., 2024), but no study has examined how personality shapes perceptions across a full spectrum of NFT values.

A second gap concerns the multi-layered value of NFTs. NFTs are not a singular product category, and typically integrate with traditional product forms. NFT art exemplifies this complexity by fusing blockchain technology with artistic expression across visual and auditory formats (Guan et al., 2024). Unlike traditional art, NFT art embodies multi-layered value, including aesthetic appeal, functionality, and technological novelty. Users may engage as collectors, investors, or trend followers, depending on their motivations and value priorities. This heterogeneity makes value perception highly personalized, yet prior research often treats NFTs as a monolithic category (Griffiths et al., 2024; Xie et al., 2024; Yilmaz et al., 2023).

We therefore adopt NFT art as a focal case and ask***: How do consumers with different personality traits perceive the distinct value dimensions associated with NFT art?*** We employ the Big Five framework because its domains align with the values embedded in NFT art, and the Big Five is also well-validated in psychology and consumer research (Barrick & Mount, 1991; Ul Islam et al., 2017). By examining the relationship between personality traits and 14 value dimensions of NFT art, we aim to advance the understanding of polarized attitudes and offer practical insights for NFT developers, artists, and platforms aiming to align their strategies with diverse consumer preferences.

2. Background

2.1 NFT and NFT Art

Within the evolving virtual ecosystem that parallels the physical world, NFTs have gained substantial attention as blockchain-based assets that enable verifiable ownership, authenticity and uniqueness (Griffiths et al., 2024; Taherdoost, 2022). NFTs are unique digital identifiers recorded on the blockchain and can be linked to a wide range of digital or physical assets, such as in-game items, membership cards, or artworks (Ali et al., 2023; Wang et al., 2021). Recent studies have begun to explore how users perceive NFT value. For example, Griffiths et al. (2024) examined intrinsic motivation, identified regulation, and external regulation. Yilmaz et al. (2023) highlighted monetary, utility, fun, uniqueness, community, ownership, and technology appeal. Xie et al. (2024) emphasized informative, entertainment, expressive, and uniqueness-based values.

While these studies provide useful insights, they tend to conceptualize NFTs as a unitary product category, overlooking the fact that they function as composite entities. NFTs possess a dual identity: they are blockchain-based assets appealing to those drawn to technological novelty (Chohan & Paschen, 2023), and they also integrate with established product categories such as art, fashion, and gaming, creating emotional, economic, and functional value. Thus, rather than serving a singular purpose, NFTs embody multiple layers of value.

In parallel, growing research acknowledges the critical role of individual differences in impacting NFT value perceptions (Alkhudary et al., 2023; Cho et al., 2024; Xie et al., 2024; Yang et al., 2024). Prior studies have examined cultural orientation (Sung et al., 2023), value expectations (Griffiths et al., 2024), NFT project communities (Zalan & Toufaily, 2024), and demographics such as age and income (Ng et al., 2025). Luo et al. (2024) linked personality traits (extraversion and conscientiousness) to investment value, but this work focused narrowly on financial aspects, leaving broader value dimensions underexplored.

Personality traits offer a promising lens for explaining heterogeneity in how users assign value (Marbach et al., 2016). Prior research shows that personality influences consumer value perception in virtual environments. For example, extraverted individuals derive greater value from social aspects, participating more actively in virtual communities and interactions (Huang & Yang, 2010; Mai & Olsen, 2015). Conversely, individuals with high neuroticism tend to perceive less value in such social engagement (Huang & Yang, 2010). Openness has been associated with a stronger appreciation of emotional, epistemic, and economic values in digital content consumption (Ju et al., 2018). These findings suggest that personality traits may significantly influence how users evaluate different value dimensions of NFT art, yet this relationship remains largely unexamined.

2.2 Value perception of NFT art

2.2.1. Product-related values. Consumer perceived value is recognized as a multidimensional construct (e.g., Babin et al., 1994; Sánchez-Fernández & Iniesta-Bonillo, 2007; Zeithaml, 1988). Among the established models, the PERVAL framework (Sweeney & Soutar, 2001) is widely used, grouping value into emotional, social, functional, and economic categories. We adopt PERVAL as the foundation for assessing the product-related value of NFT art, incorporating enjoyment, subjective norm, sense of community, cost, and quality. Recognizing the unique nature of NFTs, we further extend the framework to include technological and artistic aspects.

2.2.2. NFT technology-related values. From a technological perspective, this study includes 5 dimensions. Authenticity refers to verifiable authorship and originality ensured by blockchain. Security refers to protection against fraud, tampering, and unauthorized access at the security level of owning an NFT. Information transparency refers to accessible metadata and transaction history that reduces information asymmetry. Uniqueness refers to the one-of-a-kind nature of NFTs. Novelty refers to innovation and technological advancement (Tahmasbi & Fuchsberger, 2024; Wang et al., 2021).

2.2.3. Art-related values. From an art-related perspective, we include 4 dimensions. Aesthetics means visual or auditory appeal. Return on investment (ROI) means anticipated financial gain from trading NFT art. Artist/developer's attractiveness covers the reputation and popularity of the creator. Self-expressiveness means the value of expressing personal identity and taste (Formanek, 2012; McIntosh & Schmeichel, 2004).

2.3 Personality traits

Personality traits represent the psychological characteristics that shape how individuals perceive, think, feel, and behave (Harris & Lee, 2004; Parks-Leduc et al., 2015). The Big Five framework is the most widely adopted and empirically validated framework in behavioral research. It has demonstrated strong predictive power across disciplines, and is frequently used to explain variations in individual behavior and decision-making (Barrick & Mount, 1991; Marbach et al., 2016; Watjatrakul, 2020).

The framework consists of 5 dimensions: 1) *Extraversion* reflects sociability, energy, and assertiveness. Extraverts are typically sociable, talkative, and action-oriented (Barrick & Mount, 1991; Hogan, 2002), while introverts are more reserved, less outgoing, and more likely to keep their feelings to themselves (Eysenck, 1991). 2) *Neuroticism* refers to emotional instability and a tendency to experience anxiety and mood fluctuations. Higher scores indicate a greater sensitivity to stress, and they may perceive external changes or risks with greater concern (Barrick & Mount, 1991; McCrae & Costa, 1985), whereas lower scores are more emotionally stable. 3) *Agreeableness* relates to cooperation, trust, compassion, and social harmony. Agreeable individuals prioritize interpersonal relationships and exhibit a greater willingness to accommodate others' needs (Barrick & Mount, 1991; McCrae & Costa, 1985), while less agreeable individuals may be more skeptical or self-focused. 4) *Conscientiousness* involves organization, self-discipline, responsibility, and goal-directed behavior. High conscientious individuals are methodical, detail-oriented, prefer structure, and are often risk-averse (Barrick & Mount, 1991; Digman, 1990). 5) *Openness* relates to intellectual curiosity, creativity, and imagination. Open individuals seek new ideas, diverse experiences, and are more receptive to change and innovation (Barrick & Mount, 1991; Digman, 1990; McCrae & Costa, 1985).

The Big Five framework is especially suitable for studying NFT art and other technology-embedded products in the virtual economy because it encompasses traits relevant to technological, financial, and artistic dimensions, rather than focusing on a single aspect. For example, neuroticism reflects concerns about uncertainty and financial risk in NFT markets, while openness captures receptivity to technological innovation and aesthetic creativity. By spanning these perspectives, the Big Five offers a multidimensional lens for explaining how individuals interpret the diverse values embedded in NFT art.

3. Method

3.1 Survey design and data collection

This study employed an online survey. Data collection was conducted via the Prolific platform (https://www.prolific.com), with participants receiving $3 compensation in line with platform policies. Before launch, the survey was reviewed by 6 doctoral researchers, 2 postdoctoral researchers, and 2 professors with backgrounds in marketing, NFTs and survey design to ensure clarity and validity.

The final survey consisted of 3 sections. Section 1 presented a consent form outlining participants' rights, including the option to withdraw at any time. Section 2 introduced NFTs and NFT art to establish baseline knowledge, followed by a 13-item true/false quiz (e.g., "The NFT art piece you own is the only one in the world—true/false"). Only those answering all of the questions correctly could proceed, and those who failed were given a chance to review the material and retake the quiz. Section 3 included measures of participants' perceptions of NFT art and their personality traits.

A pilot study (n = 47) was conducted in December 2023. Feedback was collected through open-ended comments. The main survey was conducted between January and February 2024. Of 875 total responses, 70 were excluded for failing two attention check questions, exhibiting response patterns (e.g., consistently choosing the same answer), or completing the survey in an unusually short time (Meade & Craig, 2012).

The final sample (n=805) was 64.2% male and 35.8% female, with 66.6% aged under 35. Most were employed full-time (60.4%). Education ranged from secondary school to doctoral level, with bachelor's degrees (45.8%) and high school/vocational training (28.8%) most common. Annual household income was typically between USD 10,000 and 69,999 (64.5%). Participants were primarily from South Africa (17.8%), the UK (13.4%), the US (8.7%), Nigeria (7.8%), and Poland (7.2%). Nearly half (48.7%) had prior NFT purchase experience.

3.2 Measurements

This study employed both adapted and newly developed items based on prior research, each assessed on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). As for NFT technology-related values, *authenticity* was assessed through items beginning with "NFT art generally": "features verified ownership", "ensures that the art piece is the original one", "avoids unauthorized copying", and "has proven authenticity" (Chohan & Paschen, 2023; Park et al., 2022). *Security* was measured through items beginning with "NFT art can generally be": "protected from fraud issues" and "protected from hacking"; as well as items beginning with "NFT art generally has": "a secure transaction process" and "untampered information (untampered means retaining original and unaltered state)" (Iansiti & Lakhani, 2017; Park et al., 2022). *Information transparency* was assessed through items beginning with "NFT art generally has": "publicly visible information records", "transparent access to its information records", "a transparent view of any activity in the information records", and "a transparent flow (the entire lifecycle of data) of the entire information record" (Malik & Singh, 2022; Valeonti et al., 2021). *Novelty* was measured by items beginning with "The combination of NFT and art is": "imaginative", "surprising", "innovative", and "new" (Huang, 2003). *Uniqueness* was measured through items beginning with "NFT art is generally": "highly unique", "one of a kind", "possesses a certain level of specialness", and "exhibits a degree of scarcity" (Franke & Schreier, 2008; Lee et al., 2023).

In terms of the values related to art, *aesthetics* was assessed by items beginning with "NFT art is generally": "visually or auditorily striking", "good-looking or good-sounding", and "looks or sounds appealing" (Homburg et al., 2009). *ROI* was assessed through items beginning with "NFT art is generally": "a good financial investment" and "a good store of value (its price will not diminish surprisingly)"; as well as items beginning with "NFT art generally": "experiences price increases over time" and "enables one to make more money" (He et al., 2018). *Artist/developer's attractiveness* was measured by items beginning with "NFT art generally involves": "artists/developers whom I like", "well-recognized artists/developers", "artists/developers with a good reputation", and "artists/developers who make me feel comfortable" (Torres et al., 2019). *Self-expressiveness* was measured by items beginning with "NFT art generally": "helps me represent what kind of person I am", "crafts my identity", "lets me express myself", and "lets me shape my own identity/personality" (De Vries et al., 2017).

From the perspective of regular product values, *enjoyment* was assessed by items beginning with "NFT art is generally": "enjoyable", "exciting", "pleasant", and "interesting" (Van der Heijden, 2004). *Subjective norm* was measured by "People I know would think that buying NFT art is a good idea (if they are familiar with NFTs)", "People who influence my attitudes would recommend NFT art (if they are familiar with NFTs)", "People who are important to me would think positively of me purchasing NFT art (if they are familiar with NFTs)", and "People whom I appreciate would encourage me to buy NFT art (if they are familiar with NFTs)" (Hamari & Koivisto, 2015). *Sense of community* was measured through items beginning with "NFT art enables me to": "feel like a member of the NFT community", "feel that I belong to a community", "feel connected to other people of a community", and "have a good bond with others in the NFT community" (Peterson et al., 2008). *Cost* was assessed through items beginning with "NFT art is generally": "reasonably priced", "offers value for money", and "a good product for the price"; as well as "NFT art would be generally economical" (Sweeney & Soutar, 2001). *Quality* was evaluated by items beginning with "NFT art, on average,": "exhibits consistent quality (based on my perception)", "is well-made (based on my perception)", "maintains an acceptable standard of quality (based on my perception)", and "would perform consistently (based on my perception)" (Sweeney & Soutar, 2001). *Personality traits* were measured using the BFI-10 scale (Rammstedt & John, 2007).

4. Data analysis and results

4.1 Validity and reliability

The data analysis was conducted using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4.0. For the Big Five personality traits, mean scores were computed to represent each dimension.

To evaluate reliability and convergent validity, we calculated Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). All constructs exceeded recommended thresholds ($\alpha > 0.70$, $CR > 0.70$, $AVE > 0.50$, Table 1) (Fornell & Larcker, 1981; Nunnally, 1994).

To evaluate discriminant validity, three approaches were applied: 1) Cross-loadings confirmed that items loaded higher on their intended constructs than on others (Hair et al., 2013). 2) The Fornell–Larcker criterion showed that the square root of each construct's AVE exceeded its correlations with other constructs, with no inter-construct correlation exceeding 0.9 (Fornell & Larcker, 1981; Pavlou et al., 2007). One validity issue between cost and ROI led to the removal of the item "NFT art is generally a good product for the price". 3) The Heterotrait–Monotrait Ratio of Correlations (HTMT) remained below 1 for all construct pairs, confirming discriminant validity (Henseler et al., 2015). Collectively, these results provide evidence supporting the discriminant validity of the measurement model.

The structural model included 70 primary paths. To control the overfitting issue we measured the Q^2 values, and all constructs exhibited positive Q^2 values (ranging from 0.062 to 0.148; all > 0) indicating satisfactory predictive relevance. To limit false positives from multiple comparisons, we applied the Benjamini–Hochberg procedure at $q = 0.05$, applied to the bootstrapped (5,000 samples) p-values exported from SmartPLS. We report both nominal p-values and FDR-adjusted p-values in Table 2. Of these, 32 paths met nominal significance at $p \leq 0.05$, and 29 remained significant after FDR correction at $q = 0.05$ (Benjamini & Hochberg, 1995). Unless noted otherwise, all p-values reported in Section 4.2 (Results) are FDR-adjusted.

Table 1. Reliability and convergent validity

Construct	α	CR	AVE
NFT technology-related			
Authenticity	0.832	0.888	0.664
Security	0.811	0.875	0.637
Information transparency	0.857	0.901	0.697
Novelty	0.826	0.885	0.659
Uniqueness	0.833	0.890	0.672
Art-related			
Aesthetics	0.893	0.933	0.824
Return on investment	0.885	0.920	0.743
Artist/developer's attractiveness	0.903	0.932	0.774
Self-expressiveness	0.931	0.951	0.828
Product-related			
Enjoyment	0.937	0.955	0.840
Subjective norm	0.948	0.963	0.866
Sense of community	0.950	0.964	0.870
Cost	0.854	0.911	0.774
Quality	0.912	0.938	0.792

4.2 Results

For **NFT technology-related values**, *agreeableness* had a significant positive effect on novelty ($\beta = 0.134$, $p = 0.003$) and uniqueness ($\beta = 0.120$, $p = 0.010$). *Conscientiousness* had significant positive effects on authenticity ($\beta = 0.262$, $p < 0.001$), security ($\beta = 0.189$, $p < 0.001$), information transparency ($\beta = 0.123$, $p = 0.008$), novelty ($\beta = 0.227$, $p < 0.001$), and uniqueness ($\beta = 0.256$, $p < 0.001$). *Neuroticism* had a significant negative effect on information transparency ($\beta = -0.127$, $p = 0.008$). *Openness* had a significant positive impact on information transparency ($\beta = 0.109$, $p = 0.015$).

For **art-related values**, *agreeableness* had significant positive impacts on aesthetics ($\beta = 0.170$, $p < 0.001$), ROI ($\beta = 0.212$, $p < 0.001$), artist/developer's attractiveness ($\beta = 0.185$, $p < 0.001$), and self-expressiveness ($\beta = 0.154$, $p < 0.001$). *Conscientiousness* had significant positive effects on aesthetics ($\beta = 0.234$, $p < 0.001$), ROI ($\beta = 0.200$, $p < 0.001$), artists/developer's attractiveness ($\beta = 0.243$, $p < 0.001$), and self-expressiveness ($\beta = 0.247$, $p < 0.001$). *Extraversion* showed a significant positive impact on ROI ($\beta = 0.090$, $p = 0.031$).

For **product-related values**, *agreeableness* had significant positive effects on enjoyment ($\beta = 0.155$, $p < 0.001$), subjective norm ($\beta = 0.170$, $p < 0.001$), sense of community ($\beta = 0.121$, $p = 0.006$), cost ($\beta = 0.226$, $p < 0.001$), and quality ($\beta = 0.174$, $p < 0.001$). *Conscientiousness* showed significant positive effects on enjoyment ($\beta = 0.249$, $p < 0.001$), subjective norm ($\beta = 0.203$, $p < 0.001$), sense of community ($\beta = 0.242$, $p < 0.001$), cost ($\beta = 0.196$, $p < 0.001$), and quality ($\beta = 0.224$, $p < 0.001$). *Extraversion* had a significant positive effect on subjective norm ($\beta = 0.105$, $p = 0.008$). These results are summarized in Table 2.

Table 2 Effects of personality traits on consumer perceived value dimensions

IV	DV	β	t	p	95% CI		p (FDR-adjusted)	IV	DV	β	t	p	95% CI		p (FDR-adjusted)
	NFT technology-related value								*Product-related value*						
AGR	AUT	0.075	1.913	0.056	0.001	0.154	0.114	AGR	ENJ	0.155	3.946	0.000	0.077	0.230	0.000
	SEC	0.091	2.212	0.027	0.012	0.172	0.059		SUN	0.170	4.495	0.000	0.097	0.244	0.000
	INT	0.075	1.784	0.074	-0.008	0.158	0.136		SOC	0.121	3.104	0.002	0.046	0.197	0.006
	NOV	0.134	3.404	0.001	0.058	0.210	0.003		COS	0.226	6.126	0.000	0.155	0.300	0.000
	UNI	0.120	2.908	0.004	0.041	0.202	0.010		QUA	0.174	4.528	0.000	0.100	0.250	0.000
CON	AUT	0.262	7.581	0.000	0.194	0.330	0.000	CON	ENJ	0.249	6.730	0.000	0.170	0.322	0.000
	SEC	0.189	5.121	0.000	0.119	0.262	0.000		SUN	0.203	5.215	0.000	0.127	0.280	0.000
	INT	0.123	3.000	0.003	0.042	0.202	0.008		SOC	0.242	6.463	0.000	0.169	0.314	0.000
	NOV	0.227	6.063	0.000	0.151	0.300	0.000		COS	0.196	5.230	0.000	0.125	0.271	0.000
	UNI	0.256	7.199	0.000	0.187	0.326	0.000		QUA	0.224	5.880	0.000	0.151	0.300	0.000
EXT	AUT	-0.005	0.122	0.903	-0.081	0.070	0.916	EXT	ENJ	0.067	1.831	0.067	-0.006	0.138	0.130
	SEC	-0.006	0.163	0.870	-0.084	0.068	0.909		SUN	0.105	2.995	0.003	0.036	0.175	0.008
	INT	-0.036	0.885	0.376	-0.116	0.045	0.425		SOC	0.053	1.440	0.150	-0.018	0.128	0.223
	NOV	0.043	1.129	0.259	-0.030	0.117	0.319		COS	0.036	1.055	0.292	-0.031	0.103	0.341
	UNI	-0.003	0.077	0.939	-0.077	0.068	0.939		QUA	0.071	1.965	0.050	-0.003	0.141	0.106
NEU	AUT	-0.069	1.724	0.085	-0.146	0.010	0.145	NEU	ENJ	-0.052	1.325	0.185	-0.130	0.026	0.254
	SEC	-0.075	1.905	0.057	-0.152	0.003	0.114		SUN	-0.061	1.560	0.119	-0.139	0.017	0.185
	INT	-0.127	2.978	0.003	-0.212	-0.043	0.008		SOC	-0.053	1.348	0.178	-0.131	0.023	0.249
	NOV	-0.071	1.788	0.074	-0.150	0.005	0.136		COS	-0.066	1.769	0.077	-0.141	0.009	0.138
	UNI	-0.069	1.705	0.088	-0.150	0.010	0.147		QUA	-0.053	1.363	0.173	-0.129	0.023	0.249
OPE	AUT	0.045	1.126	0.260	-0.033	0.124	0.319	OPE	ENJ	0.061	1.604	0.109	-0.012	0.136	0.173
	SEC	0.090	2.284	0.022	0.014	0.170	0.051		SUN	0.006	0.174	0.862	-0.063	0.077	0.909
	INT	0.109	2.771	0.006	0.032	0.186	0.015		SOC	0.064	1.675	0.094	-0.012	0.139	0.153
	NOV	0.045	1.127	0.260	-0.033	0.124	0.319		COS	0.040	1.089	0.276	-0.032	0.110	0.327
	UNI	0.049	1.266	0.205	-0.027	0.126	0.271		QUA	0.043	1.136	0.256	-0.031	0.116	0.319
							Art-related value								
AGR	AES	0.170	4.280	0.000	0.095	0.249	0.000	NEU	AES	-0.058	1.475	0.140	-0.136	0.019	0.213
	ROI	0.212	5.671	0.000	0.140	0.287	0.000		ROI	0.007	0.192	0.848	-0.064	0.084	0.909
	ADA	0.185	4.756	0.000	0.110	0.263	0.000		ADA	-0.020	0.535	0.593	-0.097	0.054	0.649
	SEE	0.154	4.068	0.000	0.080	0.227	0.000		SEE	-0.039	1.025	0.305	-0.112	0.037	0.350
CON	AES	0.234	6.119	0.000	0.157	0.309	0.000	OPE	AES	0.042	1.118	0.264	-0.031	0.116	0.319
	ROI	0.200	5.255	0.000	0.126	0.277	0.000		ROI	-0.005	0.136	0.891	-0.076	0.069	0.916
	ADA	0.243	6.528	0.000	0.170	0.315	0.000		ADA	0.032	0.840	0.401	-0.042	0.106	0.446
	SEE	0.247	6.796	0.000	0.177	0.318	0.000		SEE	0.048	1.309	0.191	-0.024	0.118	0.257
EXT	AES	0.050	1.361	0.174	-0.022	0.122	0.249								
	ROI	0.090	2.480	0.013	0.017	0.159	0.031								
	ADA	0.081	2.206	0.027	0.009	0.153	0.059								
	SEE	0.062	1.742	0.082	-0.007	0.132	0.144								

Note. Bootstrapping samples = 5,000; IV = independent variable; DV = dependent variable; β = standardized regression coefficient; CI = confidence interval; AUT = authenticity; SEC = security; INT = information transparency; NOV = novelty; UNI = uniqueness; ENJ = enjoyment; SUN = subjective norm; SOC = sense of community; COS = cost; QUA = quality; AES = aesthetics; ROI = return on investment; ADA = artist/developer's attractiveness; SEE = self-expressiveness; AGR = agreeableness; CON = conscientiousness; EXT = extraversion; NEU = neuroticism; OPE = openness.

5. Discussion

Our findings confirm that personality traits shape how users perceive the value of NFT art. Overall, individuals high in conscientiousness and agreeableness reported greater perceived value, whereas those high in neuroticism exhibited the opposite tendency. Extraversion and openness exerted more limited effects. Together, these patterns help to explain the polarization seen in NFT evaluations, illustrating why some individuals are supportive while others remain skeptical. Building on these observations, we next discuss the most theoretically meaningful results and other significant effects acknowledged in the Results section.

Agreeable users agree with most value propositions of NFTs across the spectrum. Our results indicate that highly agreeable individuals perceive distinct value dimensions in NFT art, especially in areas offering financial and social benefits, such as subjective norms, artist/developer reputation, and quality. However, these users place comparatively less emphasis on authenticity, security, and information transparency.

Individuals high in agreeableness are generally empathetic, cooperative, and inclined to trust others (Barrick & Mount, 1991). This inclination toward trust and interpersonal harmony likely explains their appreciation for subjective norms, sense of community, artist/developer's reputation, and self-expressiveness, as they may value products that are socially approved, endorsed by peers, developed by trustworthy creators, or reflective of social identity (Graziano & Tobin, 2002). Moreover, our findings align with prior work showing that agreeable individuals place higher emphasis on product quality, while less agreeable individuals tend to be more skeptical and critical, questioning product credibility (Wang & Yang, 2008).

Besides, because agreeable users are more trusting, they may assume that authenticity and security are already ensured and therefore place less emphasis on these aspects. Similarly, their lower concern with information transparency may reflect a reliance on social cues (e.g., peer approval, creator's reputation) rather than on product data.

Conscientious users not only embrace the full range of NFT value propositions, but also exhibit a generally stronger appreciation compared to other personality traits. This trait was positively correlated with all 14 value dimensions across NFT technology-, art-, and product-related categories, indicating a broadly favorable perception of NFT art.

Conscientious individuals are characterized by self-discipline, goal orientation, and a preference for structure and order (Barrick & Mount, 1991). Their stronger appreciation for authenticity, security, and information transparency reflects how blockchain's immutability and traceability reduce uncertainty and create structured systems of ownership and transaction, aligning with their need for control and predictability. Moreover, their positive evaluations of cost and ROI support prior findings that conscientious individuals are more likely to invest in cryptocurrencies and NFTs as part of strategic, diversification-driven financial behavior (Luo et al., 2024). Furthermore, their preference for the artist/developer's reputation may stem from a reliance on established expertise or status as a convenient reference for product quality, consistent with research linking conscientiousness to convenience-motivated behavior (Huang & Yang, 2010). Besides, their appreciation for subjective norms and a sense of community may be driven by a desire for self-efficacy (Roberts et al., 2014), as conscientious users may gain confidence from social validation and alignment with peer expectations.

Extraverted users show limited enthusiasm for most NFT value dimensions. The results indicate that extraversion is not a strong predictor of perceived NFT art values, although significant associations were found with subjective norms and ROI.

Extraverts are typically sociable, assertive, and active (Barrick & Mount, 1991). The significant effect on subjective norms supports the view that extraverts are more responsive to peer influence when evaluating NFTs, consistent with literature on social motivation and peer-driven consumption (Huang & Yang, 2010; Wolfinbarger & Gilly, 2001). These results also align with studies showing that extraverts derive stronger value from social aspects in virtual communities (Huang & Yang, 2010; Mai & Olsen, 2015). Taken together, NFT art may function as a social symbol of success and popularity, aligning with extraverts' desire for recognition. Moreover, their positive association with ROI aligns with prior findings that extraverts are more likely to invest in high-profile virtual assets such as Bitcoin and Ethereum (Luo et al., 2024).

However, our results diverge from prior research suggesting that extraversion may predict engagement with virtual communities (Mai & Olsen, 2015). Here, extraversion did not significantly influence sense of community, and one explanation is that NFT consumption is often perceived as transactional and individualistic, lacking the emotionally embedded interactions that typically sustain community bonds.

Neurotic-trait users seem to generally disagree with the value propositions of NFTs. Our findings show that neuroticism negatively influenced perceptions of information transparency, while other associations displayed a downward trend, although not statistically significant.

Neurotic individuals tend to experience greater anxiety, self-doubt, and sensitivity to uncertainty (Larsen & Ketelaar, 1991). When faced with complex or unfamiliar products like NFTs, transparent systems may appear suspicious rather than reassuring. This sensitivity may be amplified by the volatility of NFT markets. Thus, although information transparency is designed to build trust, it may instead trigger discomfort among highly neurotic users.

The overall weak influence of neuroticism may suggest a nonlinear relationship. As suggested by Barrick and Mount (1991), behavioral differences tied to neuroticism may only become pronounced at extreme levels of emotional instability. For individuals with moderate neuroticism, value perceptions may be less variable, reducing predictive power. Also, prior research indicates that neurotic individuals may adopt a "better safe than sorry" strategy, leading to precautionary avoidance (Lommen et al., 2010). Given the uncertainty of NFT markets, such avoidance may suppress engagement and dampen perceived value rather than producing clear positive or negative evaluations.

Open users tend to take a more neutral stance toward the value propositions of NFTs. Our findings indicate that openness has a significant positive impact on information transparency, while showing no significant effects on the other values of NFT art.

Open individuals are naturally curious, creative, and drawn to novelty and complexity (Barrick & Mount, 1991). This tendency may explain their appreciation for information transparency, as features like accessible transaction histories align with their desire for information-seeking and intellectual engagement (McCrae & Costa, 1985; McElroy et al., 2007).

However, our findings diverge from prior work linking openness to a higher appreciation of new experiences, innovation and creativity (Huang & Yang, 2010; Wang & Yang, 2008), as well as emotional and economic value in contexts such as digital content consumption (Ju et al., 2018). In contrast, openness in our study did not significantly predict novelty, aesthetics, uniqueness, enjoyment, or ROI. A plausible explanation is that many users did not perceive NFT art as sufficiently novel or aesthetically compelling, particularly those already familiar with blockchain technology. Moreover, openness comprises intellectual and experience-seeking facets (Connelly et al., 2014), which NFT art may not fully engage, leading to weaker effects. Finally, openness is associated with individualism (De Jong et al., 2006), which may reduce reliance on social approval and help to explain the null effects on sense of community and subjective norm.

6. Conclusion

This study integrates the Big Five framework into the context of NFT art to explain how personality traits shape users' perceived value of tokenized products in virtual economies and the metaverse. We contribute to the existing literature by demonstrating that the Big Five is a crucial explanatory lens in early-stage product categories where market learning is limited. We examine personality traits as important priors that impact value perceptions in settings where frontier technologies intersect with traditional product categories. As a result, consumers with different traits assign varying weights to the same value dimensions. This mechanism offers insight into why individuals hold polarized appraisals in early-stage, high-uncertainty markets. Furthermore, we develop a layered value framework for NFT art. Building on consumer value theory, we conceptualize perceived value across 3 categories: product-related, NFT technology-related, and art-related. By treating NFT art as an integrated product rather than a monolithic category, this framework offers a transferable schema for theorizing tokenized and other products in the virtual economy.

From a practical perspective, our findings inform design and go-to-market strategies for developers, artists, and platforms by linking personality-driven behaviors to targeted interventions. Conscientious users, who frequently review policy pages and prefer slower, error-free checkouts, are best served with concise provenance summaries, safer wallet defaults, and reliability guarantees. Agreeable users, inclined to follow creators and participate in community events, are better supported through creator reputation hubs with third-party reviews and self-expressive display options. Extraverted users, who actively share content and use showcase features, benefit from opt-in social-proof modules. Neurotic-trait users, who repeatedly revisit risk, policy, and help sections, require short information pages with plain-language summaries that reduce information overload and anxiety. Open users, drawn to "learn more" features, are motivated by exploratory tabs and reliability guarantees.

7. Limitations

This study offers insights into how personality traits shape consumers' perceived value of NFT art. However, a few limitations should be acknowledged. First, this study focused on NFT art, which represents a major segment of the virtual asset market. Yet, NFTs also encompass other categories, such as gaming items and virtual real estate. Future research could extend the analysis to these categories to achieve a more comprehensive understanding of virtual assets. Second, while personality traits are important individual factors influencing value perceptions, other determinants may also play a role. Future work should consider additional influences such as consumption habits, prior experiences, and levels of domain-specific knowledge.

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