Article

Color Application and Expression in Film Scenes: A Case Study of "12 Monkeys"

Jiaqiu Wang [1],*

[1] University of the Arts London, London, SE5 8UF, United Kingdom
* Correspondence: Jiaqiu Wang, University of the Arts London, London, SE5 8UF, United Kingdom

Abstract: Color serves as a fundamental compositional element in cinematic visual presentation, offering significant analytical and referential value. This study examines Terry Gilliam's "12 Monkeys" (1995) from design and visual arts perspectives, employing comprehensive analytical methods including literature review, image analysis, and interdisciplinary research. The research investigates color construction within film scenic spaces, analyzing the ritualized presentation and function of color, with particular focus on color's expressive, metaphorical, symbolic, and semiotic dimensions. The study extracts the application system and construction methods of color in film scenic spaces, providing theoretical guidance and reference for personal graduation projects while enhancing the development of color systems within worldview frameworks.

Keywords: film production design; cinematic color; color representation

1. Introduction

Color in cinema transcends mere aesthetic decoration, functioning as a sophisticated narrative and symbolic system that fundamentally shapes audience perception and emotional engagement. As one of the most powerful visual elements in film-making, color operates simultaneously on conscious and subconscious levels, influencing mood, character development, thematic expression, and temporal-spatial relationships within the narrative framework [1].

The significance of color in film production design has evolved dramatically since the advent of color cinematography, transforming from a technical novelty to an integral component of cinematic language. Contemporary filmmakers increasingly recognize color as a narrative tool capable of conveying complex psychological states, social commentary, and philosophical concepts that transcend verbal dialogue and explicit visual metaphors.

This research addresses the gap in systematic analysis of color application in dystopian science fiction cinema, specifically focusing on Terry Gilliam's "12 Monkeys" as a paradigmatic example of sophisticated color orchestration [2]. The film's complex temporal narrative, dystopian themes, and psychological depth provide an ideal framework for examining how color functions as both aesthetic element and meaning-making system.

The primary research question investigates: How does color construction in "12 Monkeys" serve multiple narrative and thematic functions, and what systematic principles can be extracted for application in contemporary film production design? Secondary questions explore the relationship between color symbolism and psychological characterization, the role of color in temporal narrative structure, and the broader implications for science fiction film aesthetics [3].

2. Literature Review

2.1. Theoretical Foundations of Film Color

Color theory in cinema draws from multiple disciplinary foundations, including psychology, semiotics, and the visual arts. In cinema, color functions not merely as a visual element, but also serves narrative, emotional, and cultural-symbolic purposes.

Research in color psychology demonstrates that hues exert significant influence on human emotion, behavior, and cognition. Color perception and response are partly universal and cross-culturally consistent, yet they are also profoundly shaped by cultural background and social experience [4]. Red, for instance, is generally associated with vitality, excitement, and danger, quickly capturing attention. Filmmakers often employ red to highlight pivotal scenes, intensify tension, or convey a character's intense emotions. Blue, conversely, is commonly linked to calmness, serenity, and stability, and can be used to create tranquil atmospheres or express a character's melancholy [5].

2.2. Semiotic Approaches to Cinematic Color

Film color is not merely a visual embellishment but a powerful narrative tool that conveys emotions, symbolic meanings, and deepens the audience's understanding of the film's themes. Semiotic theory provides a framework for understanding the role of color in films, where color communicates information through two levels: denotation and connotation. Denotation refers to the literal meaning of color, while connotation involves the symbolic meanings and emotional associations carried by color within specific cultural and social contexts.

Perceptions and interpretations of color vary across cultures, stemming from factors such as history, religion, and social customs. By analyzing the "signifier" (the color itself) and the "signified" (the meaning represented by the color), the underlying meanings hidden beneath the surface of a film can be revealed. Film directors can skillfully employ color to enhance narrative effects, shape character portrayals, and create specific atmospheres.

Roland Barthes' semiotic theory aids in uncovering the deeper meanings of dystopian narratives. Current research primarily focuses on analyzing the use of color in specific films or by particular directors, as well as exploring the symbolic meanings of color across different cultural contexts [6].

2.3. Dystopian Cinema and Color Aesthetics

Dystopian films often employ specific color aesthetics to reinforce their thematic concerns. Restricted color palettes, such as muted and desaturated tones, are frequently used to depict social control, environmental degradation, and the loss of humanity. The dark blue hues in Blade Runner and the green tint in The Matrix have become iconic visual symbols of dystopian cinema. These color schemes not only create an oppressive and gloomy atmosphere but also symbolize the alienation of humanity by technology and a pessimistic warning about the future. Through an analysis of these films' color usage, we can gain deeper insight into how dystopian cinema employs color to critique social realities and express anxieties about human destiny [7]. Additionally, costume design in these films adheres to the overarching color scheme, reflecting the psychological states and social hierarchies of characters within dystopian worlds.

2.4. Terry Gilliam's Visual Style

Terry Gilliam's films are renowned for their distinctive visual style, blending surrealism, dark humor, and social critique to create highly idiosyncratic cinematic works. His early career as an animator profoundly influenced his directorial approach, with his films frequently employing distorted lenses, exaggerated sets, and high-contrast color palettes to evoke a dreamlike, grotesque visual aesthetic [8]. His works often explore the conflict between individuals and oppressive societal structures, reinforcing these themes through

deliberate visual elements. Gilliam's use of color is also deeply symbolic, frequently employing vibrant, discordant color combinations to create visual dissonance a technique that mirrors the psychological turmoil of his characters and their rebellion against reality.

3. Theoretical Framework and Research Method

3.1. Color Function Categories

This analytical framework systematically examines color functionality in "12 Monkeys" through four interlocking dimensions: expressive, metaphorical, symbolic, and semiotic. The expressive function considers color's immediate sensory impact in conveying emotional states and psychological conditions through pre-cognitive affective channels, while the metaphorical function explores how chromatic choices establish associative relationships to suggest abstract concepts and construct layered narrative meanings. The symbolic function interrogates color's capacity to signify complex themes through culturally embedded sign systems, and the semiotic function analyzes color as an organized signifying practice within the film's diegetic logic, where meaning emerges through strategic patterns of deployment and variation [9]. Together, these dimensions provide a comprehensive methodology for decoding how the film's chromatic system generates narrative complexity, thematic resonance, and psychological depth, revealing the sophisticated interplay between visual aesthetics and conceptual meaning-making in Gilliam's dystopian vision.

3.2. Spatial-Temporal Analysis Model

This study employs a spatial-temporal categorization to investigate how chromatic systems operate across 12 Monkeys' narrative architecture [10]. It examines color's differential deployment across temporal strata to demarcate past, present, and future chronologies, while simultaneously analyzing how distinct color regimes articulate spatial dichotomies between subterranean and surface environments.

The methodology further traces chromatic associations with specific characters or character groups as visual identifiers. It also examines how strategic color deployment reinforces and amplifies the film's central thematic concerns, revealing how Gilliam's color design constitutes an intricate semiotic network that organizes narrative comprehension, constructs diegetic space-time relations, characterizes dramatic personae, and articulates ideological subtexts through its structured visual language [11].

3.3. Research Method

This study employs a comprehensive multi-modal analytical approach that combines systematic frame-by-frame visual analysis with digital colorimetric measurement tools and semiotic interpretation frameworks. The methodology integrates quantitative color histogram analysis and comparative color profiling across temporal sequences with qualitative paradigmatic and syntagmatic semiotic analysis, drawing from established psychological color theory and film studies frameworks [12]. Twelve key sequences were selected based on narrative significance and chromatic complexity, with each sequence documented through high-resolution frame capture and systematic categorization according to the four-function framework: expressive, metaphorical, symbolic, semiotic, and the spatial-temporal model. The analytical approach incorporates cross-media comparison with other dystopian science fiction films while maintaining methodological transparency through detailed documentation of all analytical procedures, ensuring reproducibility and scholarly rigor while acknowledging inherent limitations in interpretive analysis regarding individual variation in color perception and technical constraints of digital color reproduction.

4. Case Study Analysis

4.1. Overall Color Architecture

"12 Monkeys" employs a predominantly desaturated color palette punctuated by strategic deployment of saturated hues. The film's color architecture reflects its central themes of environmental destruction, psychological fragmentation, and temporal displacement. The overall tone remains consistently muted, creating a sense of world-weariness that permeates all temporal periods depicted.

4.2. Temporal Color Differentiation

Future Timeline (2035): The underground future society employs a cold, institutional palette dominated by steel blues, concrete grays, and harsh fluorescent whites. This color scheme reinforces themes of sterility, control, and human disconnection from natural environments. The absence of warm colors suggests emotional barrenness and technological dominance over human experience [13].

Past Timeline (1996): The past sequences utilize slightly warmer tones while maintaining overall desaturation. Brown and amber tones suggest decay and historical distance, while the relative warmth indicates greater human connection compared to the future timeline.

Mental Institution Sequences: These scenes employ the most saturated colors in the film, particularly bright whites and clinical greens, creating psychological discomfort and suggesting the thin boundary between sanity and madness.

4.3. Red as Symbolic Element

Red functions as the film's primary color symbol, appearing strategically throughout the narrative to emphasize key thematic elements:

Violence and Trauma: Red consistently marks moments of violence, death, and psychological breakdown, serving as visual punctuation for the film's most intense sequences.

Passion and Humanity: In contrast to the cold institutional environments, red suggests retained human emotion and desire, particularly in romantic sequences between Cole and Kathryn.

Warning and Danger: Red functions as a warning system, alerting viewers to impending threat or significant narrative developments.

The systematic deployment of red creates a visual rhythm that supports narrative pacing while reinforcing thematic concerns about human nature persisting within oppressive systems.

4.4. Environmental Color Coding

Surface World: The post-apocalyptic surface world employs browns, rusts, and muted earth tones, suggesting organic decay and natural reclamation of human civilization.

Underground Society: Cold blues and grays dominate underground sequences, emphasizing artificial lighting, technological control, and separation from natural environments.

Transition Spaces: Elevators, tunnels, and doorways often feature intermediate color temperatures, serving as visual bridges between different spatial and temporal zones.

4.5. Character-Specific Color Associations

James Cole: Associated with earth tones and muted colors, reflecting his role as bridge between different temporal periods and his fundamental humanity despite institutional conditioning.

Jeffrey Goines: Linked with more saturated colors, particularly during manic episodes, suggesting his psychological instability and role as catalyst for major plot developments.

Kathryn Railly: Associated with warmer tones that gradually cool as she becomes more involved in Cole's mission, visually representing her transformation from skeptic to believer.

5. Discussion

5.1. Color as Narrative Architecture

The analysis reveals that color in "12 Monkeys" serves as a fundamental narrative architecture rather than mere aesthetic enhancement [14]. Gilliam employs color systematically to support temporal navigation, character development, and thematic reinforcement. This creates a visual language that operates independently while supporting verbal and visual narrative elements.

The film's color system demonstrates sophisticated understanding of psychological color response, employing these responses to manipulate audience emotional engagement and reinforce narrative themes. The predominantly desaturated palette creates baseline emotional states that make strategic color deployment more impactful [15].

5.2. Psychological Mechanisms of Color Response

Priming and Expectation Management: Gilliam's color system exploits psychological priming mechanisms to prepare audiences for narrative developments. The consistent association of cold colors with structured environments creates expectation frameworks that amplify the impact of warmer color intrusions. When warm colors appear in cold environments, they signal narrative disruption or character agency assertion [16].

Affective Color Processing: The film demonstrates sophisticated understanding of dual-processing models in color perception. While conscious color recognition contributes to explicit narrative understanding, unconscious affective responses to color combinations create emotional undertones that support character psychology and thematic development. The pervasive sense of unease throughout the film partially derives from subtle color discord-combinations that create psychological tension without explicit recognition.

Cultural Color Coding vs. Universal Responses: "12 Monkeys" successfully balances culturally specific color associations with universal psychological responses. While red's association with danger and passion operates cross-culturally, the specific deployment of institutional blues draws from Western cultural associations with medical and organizational authority. This dual approach maximizes both broad accessibility and cultural specificity.

5.3. Semiotic Complexity and Internal Color Logic

Establishing Internal Color Grammar: The film creates internal color grammar that operates independently of external cultural codes while building upon them. The underground society's blue-gray palette establishes internal logic where deviation signals narrative significance. This approach creates meaning systems that function within the film's diegetic world while drawing upon audience's external cultural knowledge.

Color as Character Extension: Beyond simple character association, colors function as character extensions, reflecting internal psychological states and character development arcs. Cole's gradual color palette shift from institutional grays toward earth tones visually represents his psychological journey from structured conditioning toward the recovery of personal agency. This chromatic character development operates subliminally, supporting explicit narrative character work.

Metaphorical Color Layering: The film employs multiple simultaneous color metaphor systems. Environmental decay represented through rust and brown tones operates alongside technological sterility represented through blue-gray palettes, while human

warmth manifests through strategic warm color deployment. These simultaneous systems create semantic richness that rewards multiple viewings and detailed analysis.

5.4. Implications for Contemporary Practice

Beyond Genre Convention: While "12 Monkeys" operates within science fiction genre conventions regarding color (cold futures, warm pasts), it transcends these conventions through sophisticated systematic deployment. Contemporary practitioners can extract principles that extend beyond genre-specific applications toward general narrative color construction.

Digital Color Workflow Considerations: The film's color system, created through traditional photochemical processes, offers insights for contemporary digital color workflows. The systematic restraint demonstrated in "12 Monkeys" becomes more significant in digital contexts where unlimited color manipulation possibilities can overwhelm narrative focus. The film demonstrates the power of systematic limitation in creating coherent visual narratives.

Collaborative Color Design: Gilliam's approach suggests integration between cinematography, production design, and costume design in creating unified color systems. Contemporary practice increasingly requires interdisciplinary collaboration to achieve systematic color deployment across all visual elements. The film provides model for collaborative color planning that extends beyond individual department responsibilities.

Audience Engagement Through Color: The film's color system demonstrates methods for creating active audience engagement through visual pattern recognition. Audiences unconsciously track color systems, creating investment in visual narrative development that supplements plot engagement. This approach suggests color's potential for creating viewer agency through visual detective work.

5.5. Cross-Cultural and Cross-Media Applications

Transcultural Color Strategies: The film's balance between universal and cultural color responses offers strategies for international film distribution. Systematic reliance on universal psychological color responses ensures broad accessibility, while strategic cultural color deployment provides local specificity without alienating international audiences.

Transmedia Color Consistency: The principles extracted from "12 Monkeys" apply beyond cinema toward transmedia storytelling involving games, graphic novels, and digital media. Systematic color approaches can maintain narrative coherence across different media platforms while adapting to platform-specific technical requirements and audience engagement patterns.

6. Conclusion

This analysis demonstrates that color in "12 Monkeys" operates as sophisticated narrative and thematic system that transcends aesthetic decoration. Gilliam's systematic approach to color deployment creates visual architecture that supports temporal navigation, character development, and thematic reinforcement while maintaining internal coherence and psychological effectiveness.

The four-function framework: expressive, metaphorical, symbolic, and semiotic provides a useful analytical structure for examining color in complex narrative films, while the spatial-temporal analysis model offers a practical approach for understanding how color systems support narrative architecture.

For contemporary film production design, particularly in science fiction and dystopian genres, "12 Monkeys" demonstrates the value of comprehensive color planning that integrates psychological, cultural, and narrative considerations. The film's success in creating distinctive visual identity while supporting complex narrative themes provides valuable model for contemporary practitioners.

Future research should expand this analytical framework across broader film corpora while incorporating audience reception studies to test theoretical frameworks against empirical response data. Such research could contribute to more sophisticated understanding of color's role in contemporary cinema while providing practical guidance for film production designers.

The systematic principles extracted from this analysis—constraint, differentiation, psychological reinforcement, and thematic integration—offer valuable guidelines for contemporary practice while demonstrating color's potential as a fundamental component of cinematic language rather than a supplementary aesthetic element.

References

1. R. Burgoyne, "Color in the Epic Film: Alexander and Hero1," *Rebeca-Rev. Bras. de Estud. Cinema Audiov.*, vol. 1, no. 2, pp. 26-26, 2012, doi: 10.22475/rebeca.v1n2.282.

2. E. Son, "Symbolic Image of Colors in the Animation Film, Loving Vincent," *Q. Rev. Film Video*, vol. 40, no. 7, pp. 807-826, 2023, doi: 10.1080/10509208.2023.2235991.

3. K. V. Meola, "The psychology of color," *Psychology*, vol. 432, pp. 41-43, 2005.

4. A. J. Elliot and M. A. Maier, "Color-in-context theory," in *Adv. Exp. Soc. Psychol.*, vol. 45, pp. 61-125, 2012, doi: 10.1016/B978-0-12-394286-9.00002-0.

5. K. He, "Photography, Film and Storytelling of Posthuman Crises in Blade Runner," *Eur. Rev.*, vol. 31, no. S1, pp. S77-S89, 2023, doi: 10.1017/S1062798723000406.

6. D. Foster, "Where flowers bloom but have no scent: the cinematic space of the Zone in Andrei Tarkovsky's Stalker," *Stud. Russ. Sov. Cinema*, vol. 4, no. 3, pp. 307-320, 2010, doi: 10.1386/srsc.4.3.307_1.

7. E. A. E. Klopotovskaya, Y. A. Klopotovskaya, K. Y. Arsenyevna, "Some Aspects of Film Color Semantics and Cultural Tradition," *Vestnik VGIK J. Film Arts Film Stud.*, vol. 2, no. 2, pp. 88-97, 2010, doi: 10.17816/VGIK2288-97.

8. Y. Zhang, "Comparative film studies, transnational film studies: Interdisciplinarity crossmediality, and transcultural visuality in Chinese cinema," *J. Chin. Cinemas*, vol. 1, no. 1, pp. 27-40, 2006, doi: 10.1386/jcc.1.1.27_7.

9. M. Mahrous, A. Parsa, E. As, "The effect of visual narrative language of color codes in Youssef Chahine's cinema," *ARTS: Artuklu Sanat ve Beşeri Bilimler Dergisi*, no. 13, pp. 25-51, 2025, doi: 10.46372/arts.1538835.

10. Y. S. Abdelwahab, "Power and Metaphoric Discourse in The Handmaid's Tale," *Helwan J. Engl. Stud.*, 2023, doi: 10.21608/hies.2023.192355.1003.

11. Y. Liu, "Post-pandemic Architectural Design: A Review of Global Adaptations in Public Buildings," *Int. J. Eng. Adv.*, vol. 2, no. 1, pp. 91–100, Apr. 2025, doi: 10.71222/1cj1j328.

12. D. E. Williams, "Ideology as dystopia: An interpretation of Blade Runner," *Int. Political Sci. Rev.*, vol. 9, no. 4, pp. 381-394, 1988, doi: 10.1177/019251218800900406.

13. B. Chisholm, "Red, Blue, and Lots of Green: The Impact of Color Television on Feature Film Production," in *Hollywood in the Age of Television*, pp. 213-234, 2013. ISBN: 9781315855929.

14. S. Wu, "Color and composition under big data technology: The art of visual communication in film art," *Appl. Math. Nonlinear Sci.*, vol. 9, no. 1, pp. 10, 2024.

15. H. Zhao and X. Wang, "Research on the cultural shaping and value realization path of digital media art based on multimedia technology," in *J. Phys.: Conf. Ser.*, vol. 1648, no. 2, p. 022094, Oct. 2020, IOP Publishing, doi: 10.1088/1742-6596/1648/2/022094.

16. B. T. Truong, S. Venkatesh, C. Dorai, "Application of computational media aesthetics methodology to extracting color semantics in film," in *Proc. 10th ACM Int. Conf. Multimedia*, pp. 339-342, Dec. 2002, doi: 10.1145/641007.641079.