

# Nanopublication — Computational Image Analysis - AQC0530

by Arnaud Quercy · D Major9 - Research on Harmony - Variation 10 · 2024

## Claim 1: Computational Image Analysis - AQC0530

Computational image analysis [3] of artwork D Major9 - Research [1] on Harmony - Variation 10 (AQC0530) [2] by Arnaud Quercy [2] using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2026-02-04.

### CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 2032x2709 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	E7E5DF	27.3	white	white
2	D9D5CE	15.9	white	lightgray
3	BFA385	10.3	orange	rosybrown
4	CBB7A3	9.5	orange	tan
5	716F6D	8.0	gray	dimgray
6	996848	7.0	orange	burnt sienna
7	AD8868	6.6	orange	ochre
8	92918E	5.7	gray	gray
9	4A4747	5.2	gray	darkslategray
10	B08337	4.5	yellow-orange	peru
11	9CB2B6	0.3	blue-green	steel gray [Accent]

### Color Families:

Family	%
white	43.2
orange	33.4
gray	18.9
yellow-orange	4.5
blue-green	0.3

### Accent Colors:

Hex	Family	Name	Chroma
9CB2B6	blue-green	steel gray	8.6

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.194
Mean Local Roughness	0.028

Metric	Value
Roughness Uniformity	0.029
Edge Density	0.144
Mean Gradient Magnitude	0.216
Gradient Variance	0.083
Gradient Smoothness	0.0
Directional Coherence	0.013
Pattern Complexity	0.132
Pattern Repetition	1.0
Detail Frequency Ratio	0.668
Spatial Variation	0.106
Texture Consistency	0.746

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.693
Brightness Variance	0.194
Brightness Uniformity	0.72
Brightness Skewness	-0.523
Brightness Entropy	7.083
Rms Contrast	0.194
Michelson Contrast	0.984
Weber Contrast	0.528
Mean Local Contrast	0.029
Contrast Uniformity	0.0
Dynamic Range	0.992
Effective Dynamic Range	0.565
Shadow Percentage	4.411
Midtone Percentage	37.97
Highlight Percentage	57.619
Shadow Clipping	0.0
Highlight Clipping	0.004
Tonal Balance	0.0
Fine Contrast	0.015
Medium Contrast	0.036
Coarse Contrast	0.047
Multiscale Contrast Ratio	0.319
Edge Contrast	0.216
Contrast Clustering	0.254

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.739
Color Clustering	0.835
Color Transition Smoothness	0.459
Transition Uniformity	0.478
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.017
Mean Saturation	0.172
Saturation Variance	0.04
Low Saturation Ratio	0.772
Medium Saturation Ratio	0.207
High Saturation Ratio	0.021
Saturation Clustering	1.0
Hue Concentration	0.992
Complementary Balance	0.0
Analogous Dominance	0.999
Temperature Bias	0.999

## Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

### REFERENCES

[1] Arnaud Quercy (2024). D Major9 - Research on Harmony - Variation 10 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0530.html>

[2] Quercy, A. (2024). D Major9 - Research on Harmony - Variation 10 - Gallery. [https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-10\\_5yc.html](https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-10_5yc.html)

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h [tps://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html](https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html)

### EPISTEMIC PROFILE

**Claim type** computational analysis

**Voice** third person

**Epistemic status** empirical measurement

**Methodology** computational analysis

**Certainty** high

### CHECKSUM (SHA-256)

ace45c37b5f6b89e9e69fc9be65dd0398f4234b877f13fdd-f43411582d92c53f

**Artist** Arnaud Quercy

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