

# Nanopublication — Computational Image Analysis - AQC0525

by Arnaud Quercy · D Major9 - Research on Harmony - Variation 5 · 2024













## Claim 1: Computational Image Analysis - AQC0525

Computational image analysis [3] of artwork D Major9 - Research [1] on Harmony - Variation 5 (AQC0525) [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]: 2624x3724 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		635E55	15.8	yellow-orange dimgray
2		E0B537	14.3	yellow-orange goldenrod
3		A3A06A	12.7	yellow ochre
4		CD9D2E	11.6	yellow-orange peru
5		302E2C	10.9	gray very dark gray
6		474541	8.9	gray darkslategray
7		B37628	8.0	orange darkgoldenrod
8		E4D0AA	7.9	yellow-orange wheat
9		C5B88A	7.0	yellow tan
10		DCE6E2	3.1	white white
11		200A03	0.3	red-orange very dark gray [Accent]
12		B1C1C2	0.3	blue-green silver [Accent]

### Color Families:

Family	%
yellow-orange	49.5
gray	19.8
yellow	19.6
orange	8.0
white	3.1
red-orange	0.3
blue-green	0.3

### Accent Colors:

Hex	Family	Name	Chroma
200A03	red-orange	very dark gray	10.0
B1C1C2	blue-green	silver	5.4

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.21
Mean Local Roughness	0.022
Roughness Uniformity	0.027
Edge Density	0.097
Mean Gradient Magnitude	0.183
Gradient Variance	0.071
Gradient Smoothness	0.0
Directional Coherence	0.006
Pattern Complexity	0.111
Pattern Repetition	1.0
Detail Frequency Ratio	0.64
Spatial Variation	0.139
Texture Consistency	0.697

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.537
Brightness Variance	0.21
Brightness Uniformity	0.608
Brightness Skewness	-0.264
Brightness Entropy	7.499
Rms Contrast	0.21
Michelson Contrast	1.0
Weber Contrast	0.721
Mean Local Contrast	0.024
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.659
Shadow Percentage	20.563
Midtone Percentage	46.173
Highlight Percentage	33.264
Shadow Clipping	0.004
Highlight Clipping	0.043
Tonal Balance	0.171
Fine Contrast	0.011
Medium Contrast	0.03
Coarse Contrast	0.048
Multiscale Contrast Ratio	0.236
Edge Contrast	0.183
Contrast Clustering	0.303

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.689
Color Clustering	0.645

Metric	Value
Color Transition Smoothness	0.537
Transition Uniformity	0.545
Sharp Transition Ratio	0.1
Transition Directionality	0.007
Mean Saturation	0.386
Saturation Variance	0.089
Low Saturation Ratio	0.496
Medium Saturation Ratio	0.215
High Saturation Ratio	0.289
Saturation Clustering	0.999
Hue Concentration	0.984
Complementary Balance	0.0
Analogous Dominance	0.999
Temperature Bias	0.885

## 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 5 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0525.html>
- [2] Quercy, A. (2024). D Major9 - Research on Harmony - Variation 5 - Gallery. [https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-5\\_5we.html](https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-5_5we.html)
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 <https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

## EPISTEMIC PROFILE

<b>Claim type</b>	computational analysis
<b>Voice</b>	third person
<b>Epistemic status</b>	empirical measurement
<b>Methodology</b>	computational analysis
<b>Certainty</b>	high

## CHECKSUM (SHA-256)

2f31993c55d1b2006d5081228973cbc781bafc6b8bac3b4b18c7544d-f21aad04

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2024
<b>Collection</b>	Synesthetic Explorations
<b>Certificate</b>	20240220-0021
<b>Asset code</b>	AQC0525
<b>Version</b>	1
<b>Published</b>	2026-02-03

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Published by: Art Quam Anima Publishing New York LLC — [publishing.artquamanima.com](https://publishing.artquamanima.com)

Date of publication: 2026-04-20

Persistent URI: <https://multimodal.institute/en/nanopubs/2026/02/AQC0525-computational-image-analysis-aqc0525.pdf>

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