

# Nanopublication — Computational Image Analysis - AQC0768

by Arnaud Quercy · A Minor - Research on Harmony - Variation 6 · 2024

## Claim 1: Computational Image Analysis - AQC0768

K-means clustering analysis [3] (10 colors) performed on artwork A Minor [1] - Research on Harmony - Variation 6 (AQC0768) [2] by Arnaud Quercy [2] on 2026-02-04. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

### 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]: 2410x3615 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	A32738	19.6	red-orange	brown
2	B0A899	14.8	yellow-orange	steel gray
3	9B9383	12.2	yellow-orange	gray
4	B73549	11.1	red-orange	firebrick
5	171010	10.9	black	black
6	B22423	8.5	red-orange	burnt sienna
7	7D4729	7.9	orange	russet
8	CCA383	5.4	orange	tan
9	DFBCBD	5.0	red-orange	thistle
10	B4843A	4.7	yellow-orange	peru
11	F1CDDD	0.3	red	gainsboro [Accent]
12	F3CFE2	0.3	red-violet	mistyrose [Accent]
13	48442B	0.3	yellow	dark brown [Accent]

#### Color Families:

Family	%
red-orange	44.1
yellow-orange	31.6
orange	13.3
black	10.9
red	0.3
red-violet	0.3
yellow	0.3

#### Accent Colors:

Hex	Family	Name	Chroma
F1CDDD	red	gainsboro	15.3
F3CFE2	red-violet	mistyrose	16.8
48442B	yellow	dark brown	16.3

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.203
Mean Local Roughness	0.011
Roughness Uniformity	0.011
Edge Density	0.031
Mean Gradient Magnitude	0.116
Gradient Variance	0.028
Gradient Smoothness	0.0
Directional Coherence	0.018
Pattern Complexity	0.112
Pattern Repetition	1.0
Detail Frequency Ratio	0.571
Spatial Variation	0.129
Texture Consistency	0.366

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.431
Brightness Variance	0.203
Brightness Uniformity	0.53
Brightness Skewness	-0.047
Brightness Entropy	7.07
Rms Contrast	0.203
Michelson Contrast	1.0
Weber Contrast	0.806
Mean Local Contrast	0.014
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.678
Shadow Percentage	38.673
Midtone Percentage	46.892
Highlight Percentage	14.435
Shadow Clipping	0.004
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.017
Coarse Contrast	0.034
Multiscale Contrast Ratio	0.151
Edge Contrast	0.116
Contrast Clustering	0.634

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.775
Color Clustering	0.629

Metric	Value
Color Transition Smoothness	0.71
Transition Uniformity	0.808
Sharp Transition Ratio	0.1
Transition Directionality	0.027
Mean Saturation	0.476
Saturation Variance	0.086
Low Saturation Ratio	0.394
Medium Saturation Ratio	0.2
High Saturation Ratio	0.406
Saturation Clustering	0.999
Hue Concentration	0.95
Complementary Balance	0.001
Analogous Dominance	0.989
Temperature Bias	0.996

## 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). A Minor - Research on Harmony - Variation 6 — Catalogue raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0768.html>
- [2] Quercy, A. (2024). A Minor - Research on Harmony - Variation 6 - Gallery. [https://artquamanima.com/en/artworks/2024/01/a-minor-research-on-harmony-variation-6\\_8iw.html](https://artquamanima.com/en/artworks/2024/01/a-minor-research-on-harmony-variation-6_8iw.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)

1c65fff5a045c85531852b66bb1dae6af-b6d04cb12105af384371422c538e309

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2024
<b>Collection</b>	Synesthetic Explorations
<b>Certificate</b>	20241201-0265
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