

Nanopublication – Computational Image Analysis –
AQC0743

by Arnaud Quercy · Bb Major – Research on Harmony – Variation 4 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0743

K-means clustering analysis [3] (10 colors) performed on artwork Bb Major [1] – Research on Harmony – Variation 4 (AQC0743) [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]: 3024x4032 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		84496C	14.6	red-violet	dusty mauve
2		9B74AD	13.6	red-violet	dusty mauve
3		B891D0	13.4	violet	plum
4		744153	12.5	red	dusty mauve
5		363647	11.9	violet	dusty mauve
6		926282	9.5	red-violet	dusty mauve
7		E5B872	8.0	yellow-orange	burlywood
8		232230	6.8	violet	very dark gray
9		4E4965	6.1	violet	dusty mauve
10		CEB4E9	3.6	violet	thistle
11		E3E0D4	0.3	yellow	gainsboro [Accent]
12		9E7646	0.3	orange	burnt sienna [Accent]

Color Families:

Family	%
violet	41.9
red-violet	37.7
red	12.5
yellow-orange	8.0
yellow	0.3
orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
E3E0D4	yellow	gainsboro	6.1
9E7646	orange	burnt sienna	33.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.185
Mean Local Roughness	0.016
Roughness Uniformity	0.015
Edge Density	0.076
Mean Gradient Magnitude	0.156
Gradient Variance	0.036
Gradient Smoothness	0.0
Directional Coherence	0.013
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.593
Spatial Variation	0.139
Texture Consistency	0.424

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.439
Brightness Variance	0.185
Brightness Uniformity	0.578
Brightness Skewness	0.25
Brightness Entropy	7.445
Rms Contrast	0.185
Michelson Contrast	1.0
Weber Contrast	0.715
Mean Local Contrast	0.02
Contrast Uniformity	0.058
Dynamic Range	1.0
Effective Dynamic Range	0.596
Shadow Percentage	31.025
Midtone Percentage	54.559
Highlight Percentage	14.416
Shadow Clipping	0.001
Highlight Clipping	0.002
Tonal Balance	0.174
Fine Contrast	0.007
Medium Contrast	0.024
Coarse Contrast	0.042
Multiscale Contrast Ratio	0.171
Edge Contrast	0.156
Contrast Clustering	0.576

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.756
Color Clustering	0.738
Color Transition Smoothness	0.582
Transition Uniformity	0.736
Sharp Transition Ratio	0.1
Transition Directionality	0.015
Mean Saturation	0.364
Saturation Variance	0.015
Low Saturation Ratio	0.309
Medium Saturation Ratio	0.678
High Saturation Ratio	0.013
Saturation Clustering	0.999
Hue Concentration	0.689
Complementary Balance	0.008
Analogous Dominance	0.631
Temperature Bias	0.333

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). Bb Major - Research on Harmony - Variation 4 - Catalog raisonn . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0743.html>

[2] Quercy, A. (2024). Bb Major - Research on Harmony - Variation 4 - Gallery. https://artquamanima.com/en/art-works/2024/01/bb-major-research-on-harmony-variation-4_896.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>

WHERE THIS WORK LIVES

THEMATIC ELEMENTS

- chromesthetic mapping
- Bb Major triad
- synesthetic exploration
- acrylic wood panel
- geometric color composition
- musical visualization
- harmonic translation
- contemporary color study

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

1d30d36c73129232c535e247799d8aecde86187bf4455ee15cb310b50f1e0b1f

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Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20241201-0240
Asset code	AQC0743
Identifier	NAN-COL000211
Version	1
Published	2026-02-03

ISSN: [pending – Library of Congress]

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Published by Art Quam Anima Publishing New York,
an imprint of AQA PUBLISHING LLC

c/o Northwest Registered Agent, 418 Broadway Ste N
Albany, NY 12207, USA
+1 917-764-5470

publishing.artquamanima.com

Last updated: 2026-06-03

Persistent URI: <https://multimodal.institute/en/nanopubs/2026/02/AQC0743-computational-image-analysis-aqc0743.pdf>