

Example #1: Expertise affects some dimensions more than others

What the author did (narrative synthesis)

She writes:

"the largest and most consistent effect sizes were observed for focus and emotion, whereas immersion and understanding produced weaker or less consistent differences."

and then concludes:

"artistic training may influence how viewers attend to and emotionally process artworks more strongly..."

This is a reasonable interpretation.

But it is based on eyeballing Table 2.

What a quantitative investigation would look like

Calculate:

For each dimension:

Average effect size across paintings

Dimension	Mean r
Emotion	?
Focus	?
Reward	?

Dimension	Mean r
Immersion	?
Understanding	?

Then rank them.

You could then state:

"Emotion and Focus exhibit approximately 2× larger expertise effects than Immersion."

That is evidence.

Not interpretation.

Example #2: Cubism produces a different engagement profile

What the author did

She writes:

Cubism shows large differences in emotion, reward, and focus and therefore may reflect ambiguity tolerance and analytical engagement.

Again, plausible.

But descriptive.

What quantitative analysis could have been done

Create profile vectors.

For example:

Dimension	Cubism
Emotion	0.439
Reward	0.361
Immersion	0.168
Focus	0.411
Understanding	0.371

Then compare that profile to other paintings.

Use:

- Euclidean distance
- cosine similarity
- profile clustering

Then you can show:

Cubism forms a statistically distinct engagement profile compared with the other three paintings.

Now the claim is data-driven.

Example #3: Style manipulation while subject matter is controlled

What the author did

She writes:

Because all paintings depict the same woman holding a flower, differences likely arise from stylistic manipulation.

That is narrative.

What quantitative analysis could have been done

Calculate variance across styles.

For example:

For emotion:

Style	Median
Imp	2
Exp	3
Cub	4
Sur	5

Then compare variance for:

- Emotion
- Focus
- Understanding
- Reward
- Immersion

You could then conclude:

Emotion changes substantially across styles whereas reward remains relatively stable.

That directly answers your question:

Which dimensions are most sensitive to stylistic variation?

Example #4: Convergence versus divergence

What the author did

She writes:

some dimensions show convergence while others show divergence between experts and novices.

What quantitative analysis could have been done

Define:

$$D = |Median_{Art} - Median_{NonArt}|$$

for every painting and dimension.

Then identify:

Greatest convergence

- Surrealism understanding
- Impressionism reward

Greatest divergence

- Cubism emotion
- Expressionism focus

Now you have an actual convergence/divergence map.

Example #5: Balanced versus asymmetric engagement

This is one of the clearest cases.

What the author did

She writes:

- Cubism exhibits an asymmetric profile.
- Impressionism and Expressionism are more balanced.

What quantitative analysis could have been done

Compute profile dispersion.

For each painting:

$$SD(\text{Emotion, Reward, Immersion, Focus, Understanding})$$

or

$$Range = Max - Min$$

Example:

Painting	Profile Variability
Cubism	0.27
Impressionism	0.09
Expressionism	0.11
Surrealism	0.15

Now you can objectively state:

Cubism exhibits the most asymmetric engagement profile.

Example #6: Relationships among constructs

This is probably the most important missed opportunity.

What the author did

She says:

focus, immersion, and reward may interact.

That's speculation.

What quantitative analysis could have been done

Calculate correlations.

For all participants:

Variable 1	Variable 2	Correlation
Focus	Understanding	0.72
Emotion	Reward	0.65
Immersion	Reward	0.81

Then you can conclude:

Reward is strongly linked to immersion.

or

Understanding and focus form a cognitive engagement cluster.

This would have been scientifically valuable because it moves beyond the paintings themselves and begins to reveal the structure of aesthetic engagement.

Example #7: Qualitative analysis

What the author did

Selected quotes.

Example:

Art major:

"geometric structure"

Non-art major:

"looks terrible"

Then interpreted those differences.

What quantitative analysis could have been done

Create codes.

Theme	Art majors	Non-art majors
Symbolism	15	3

Theme	Art majors	Non-art majors
Technique	22	5
Emotional reaction	7	21
Preference	5	19

Now you can statistically demonstrate:

Art majors referenced symbolism four times more frequently than non-art majors.

That is far stronger evidence.

The overarching pattern

The revised manuscript repeatedly follows this structure:

- 1. Observe pattern in table.
- 2. Describe pattern in prose.
- 3. Offer interpretation.

Whereas your review comments were often asking for:

- 1. Observe pattern.
- 2. Quantify pattern.
- 3. Test pattern.
- 4. Then interpret pattern.