

**Perceptual Organisation Affects Perception and Appreciation of  
Abstract Art: A Case Study with *Black Square and Red Square* by  
Kazimir Malevich**

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**Supplementary Material**

**Table S1.**

Original words for core variables or concepts in the language employed in the experiments (i.e., Persian) and their English equivalent.

<b>Core variables or concepts</b>		
<b>English</b>	<b>Persian (employed language)</b>	
<i>Exact square</i>	Moraba'	مربع کامل
	Daghigh	
<i>Oblique square</i>	Chahâr-	چهارگوشه
	Guše	
<i>Balanced</i>	Bâlâns	بالانس/ توازن
<i>Harmonious</i>	Hamâhangi	هماهنگی
<i>Pleasing</i>	Lezzat-	لذت بخش
	baxš	
<i>Interesting</i>	Dust-	دوست داشتنی
	daštani	

## Appendix S1

### Art Experience Questionnaire of Experiment 2.

We made a questionnaire consisting of three parts.

Part A was intended to measure *art expertise* using a mixture of six common items derived from former studies (Locher et al., 1999b, 2001b; Leder et al., 2014; Chamberlain & Wagemans, 2015; Winston & Cupchik, 1992).

#### Part A. (on Art Expertise)

Item rated from 1 (none) to 5 (very)	
1	How many art history or other art-related classes have you taken at high school level or above?
2	How many art theory or aesthetics classes have you taken at high school level or above?
3	How often do you visit museums and/or galleries with practical purposes?
4	In the average week how many hours do you spend making visual art?
5	How much information do you have about visual art's styles?
6	How much information do you have about visual art's well-known artists?
7	Have you had training in visual arts? Please specify your expertise in art. 1 = <i>professional</i> (includes artists, curators, art historians) 2 = <i>studying</i> (includes children doing the homework, school project, university project and parents helping their children to do artwork) 3 = <i>teaching</i> (ranges from primary to university) 4 = <i>non-professional</i> (includes personal interest and hobby) 5 = <i>unfamiliar</i> (includes do not have any knowledge or experience)

Note: In Part A, the reliability was  $\alpha = 0.86$ .

Part B aimed to measure *art knowledge*. This part consisted of 10 items of Smith and Smith (2006) to assess art fluency and because our experiments concerned a geometric abstract painting, we added five items where people were asked to identify the abstract artwork type (style) and artists.

**Part B.** (on Art Knowledge)

<i>Item</i>		Subjects rate each of the items on the below 5-point scale	
1	Marry Cassatt	1	I have never heard of this artist or term.
2	Munch	2	I have heard of this but don't really know anything about it.
3	John Singer Sargent	3	I have a vague idea of what this is.
4	Alessandro Boticelli	4	I understand this artist or idea when it is discussed.
5	Lorenzo Bernini	5	I can talk intelligently about this artist or idea in art
6	Fauvism		
7	Egyptian Funerary Stelae		
8	Impressionism		
9	Chinese Scrolls		
10	Abstract Expressionism		
11	Kazimir Malevich		
12	Piet Mondrian		
13	Susan Sanavandi		
14	Suprematism		
15	Abstract Art		

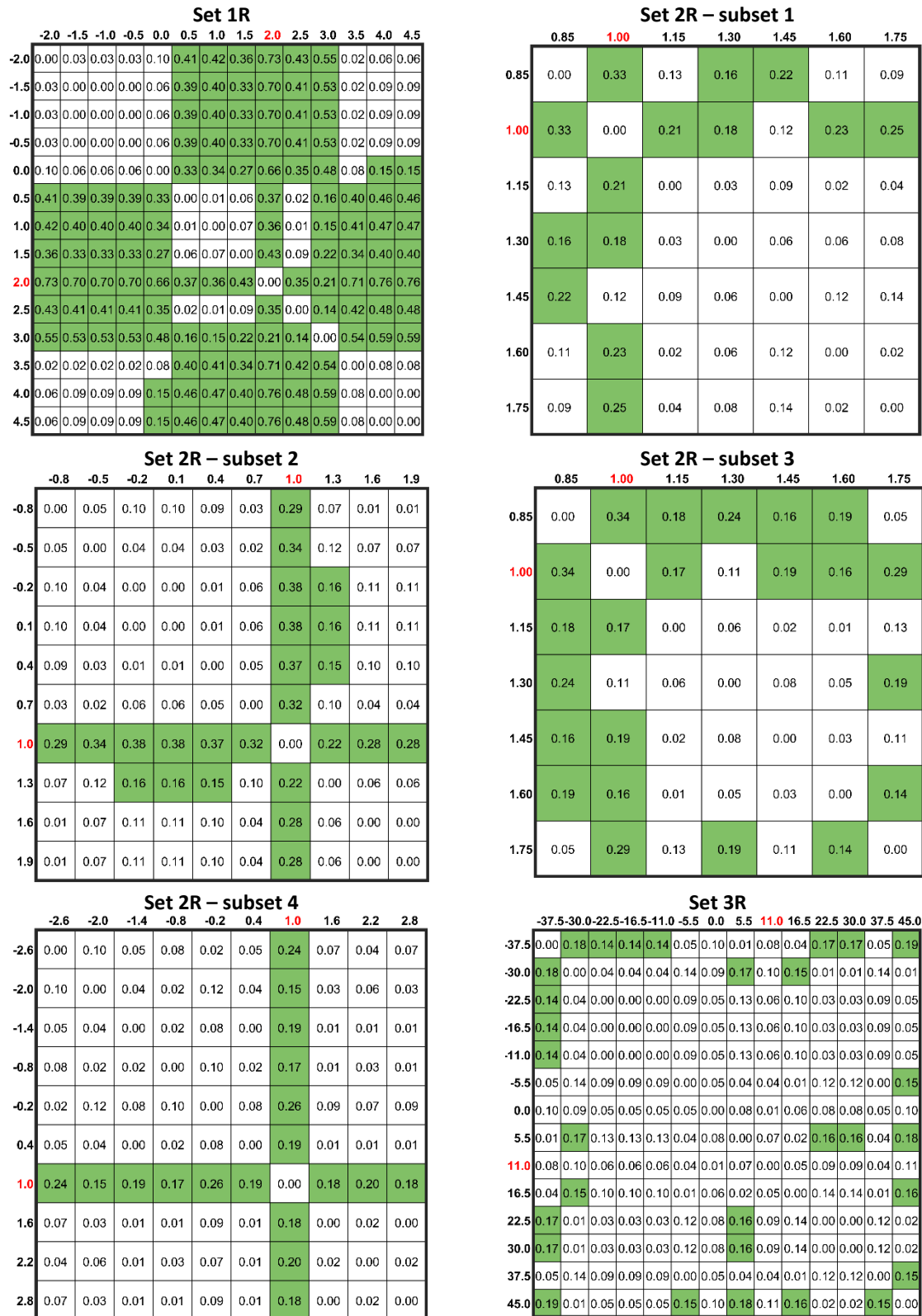
Note: In Part B, the reliability was  $\alpha = 0.96$ .

Part C aimed to measure *art interest*. It consisted of 11 items derived from the VAIK questionnaire (Specker et al., 2020). All parts were rated on a five-point scale.

**Part C.** (on Art Interest)

Item rated from 1 (none) to 5 (very)	
1	I enjoyed art classes in school.
2	I like to talk about art with others.
3	I have many friends/ acquaintances that are interested in art.
4	I am interested in art.
5	I am always looking for new artistic impressions and experiences
6	In everyday life I routinely see art objects that fascinate me
7	I come from a family interested in art .
8	How often do you visit a museum and/or galleries?
9	How often do you read books, magazines or catalogues about art?
10	How often do you look at images of artworks (catalogues, intent, etc.)?
11	How often do you visit talks about art or art history?

Note: In part C, the reliability was  $\alpha = 0.81$ .



**Figure S1.** Pairwise comparison of percentage of Yes responses in Experiment 2. Each cell indicates a pairwise comparison between two different configurations. Phi-coefficient effect sizes

are reported, and cells are marked with a green shading in the cases where the difference was statistically significant ( $p < 0.05$ ).