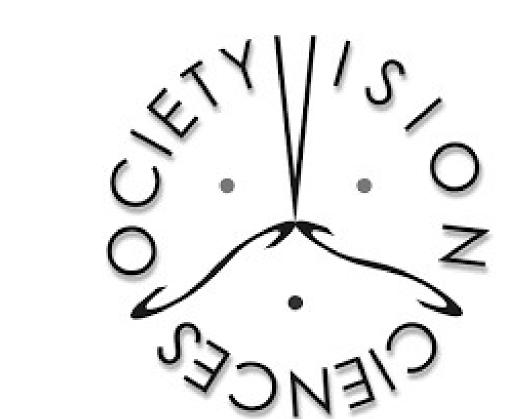
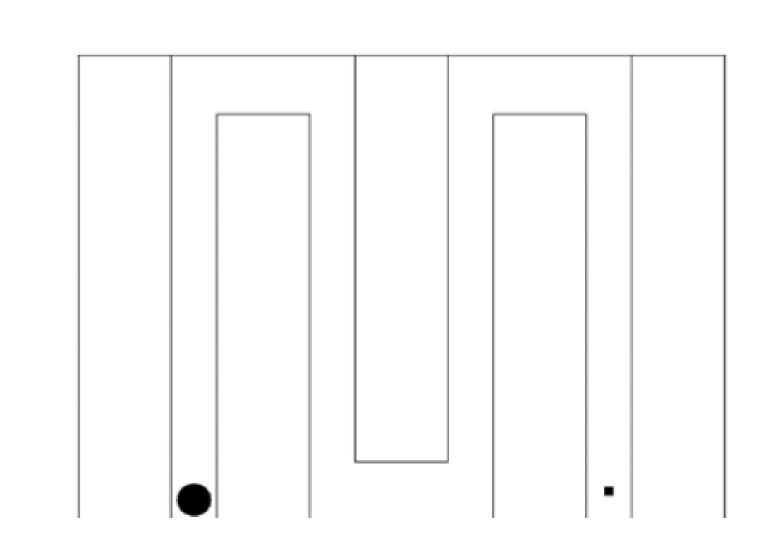


Psychophysical influence of visual perception on person's behavior (human task) using optical illusions in a background

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The Question



Do attentional heavy tasks are affected by background colour and properties?

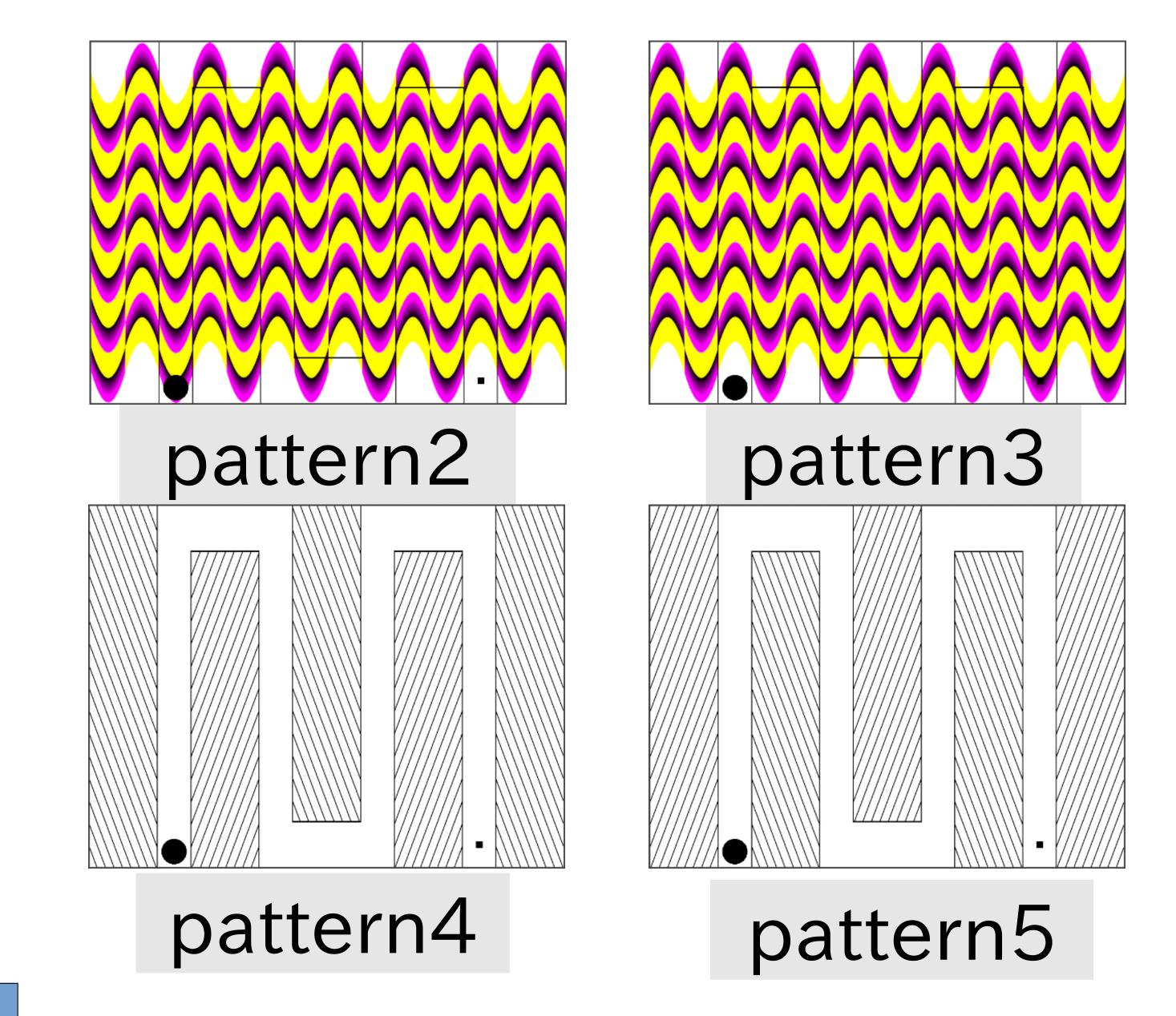
The Hypothesis

When we attend a task, attention to foreground is somehow entangled with the background.

Our actions are <u>measurably</u> different for identical tasks with different backgrounds

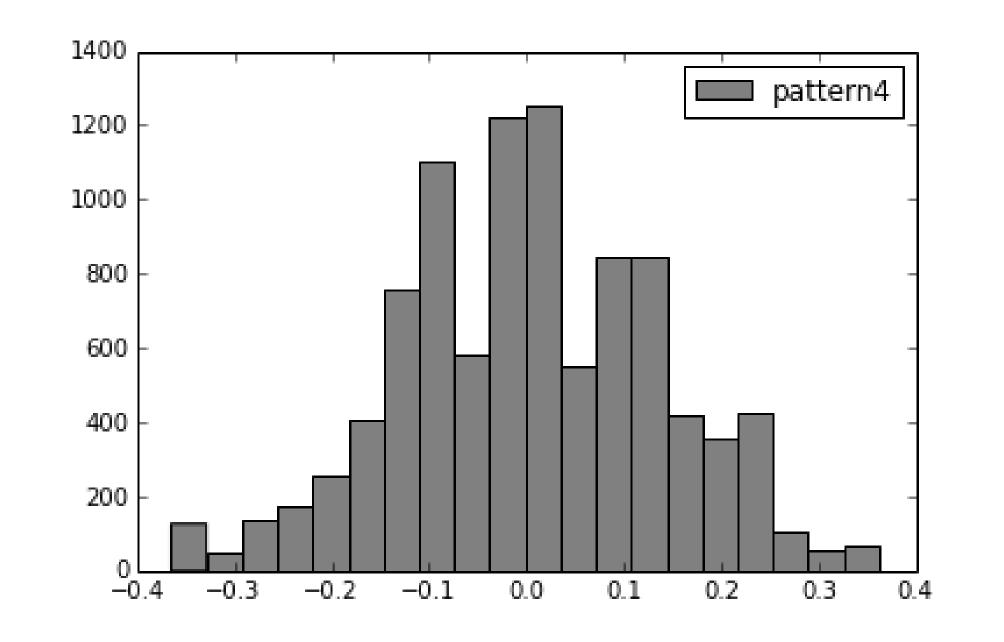
The Method

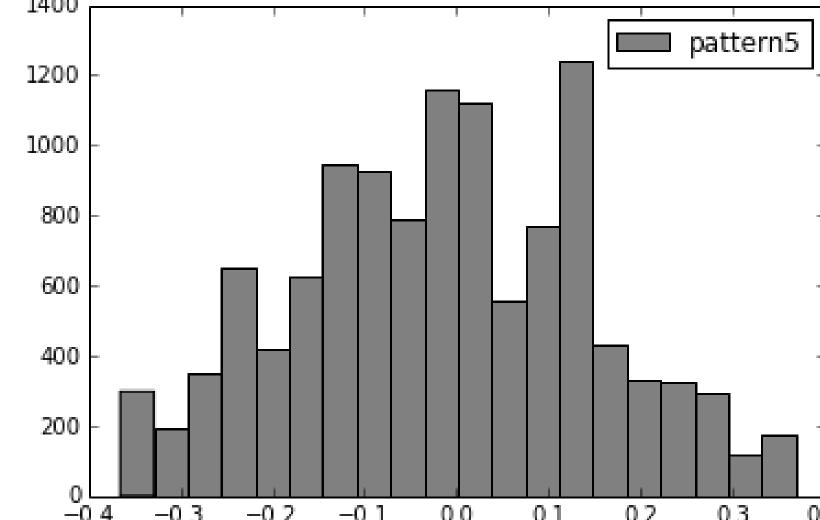
We created a simple task in which subjects were asked to move a circle along a linear course using the mouse. Five identical tasks with different patterns in the background. Optical illusion were used for enhanced effect.



Results

We found significantly different response time for identical tasks performed with different backgrounds. Data suggest that foreground task-related objects are entangled with from static task-unrelated backgrounds.

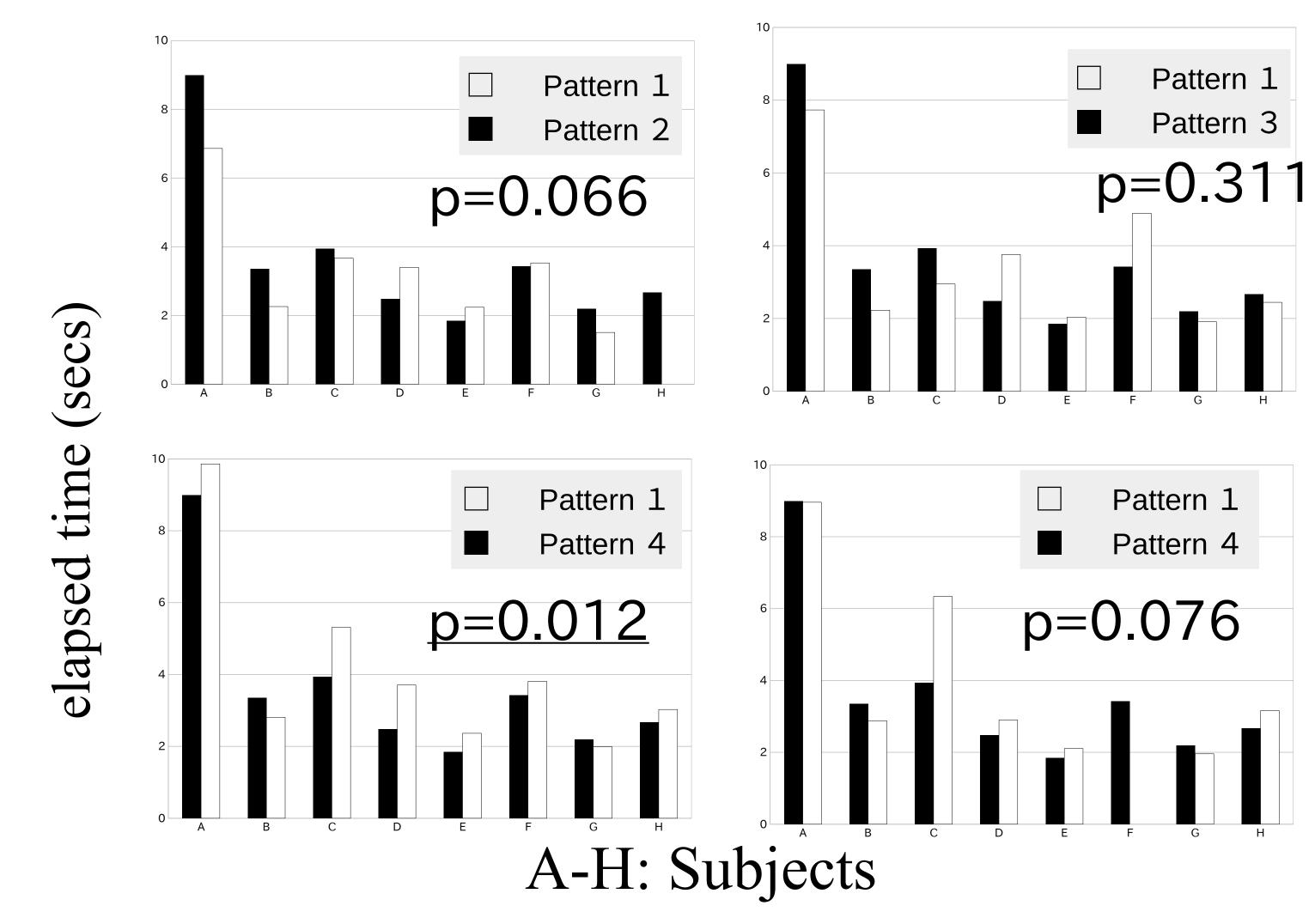




Experiment

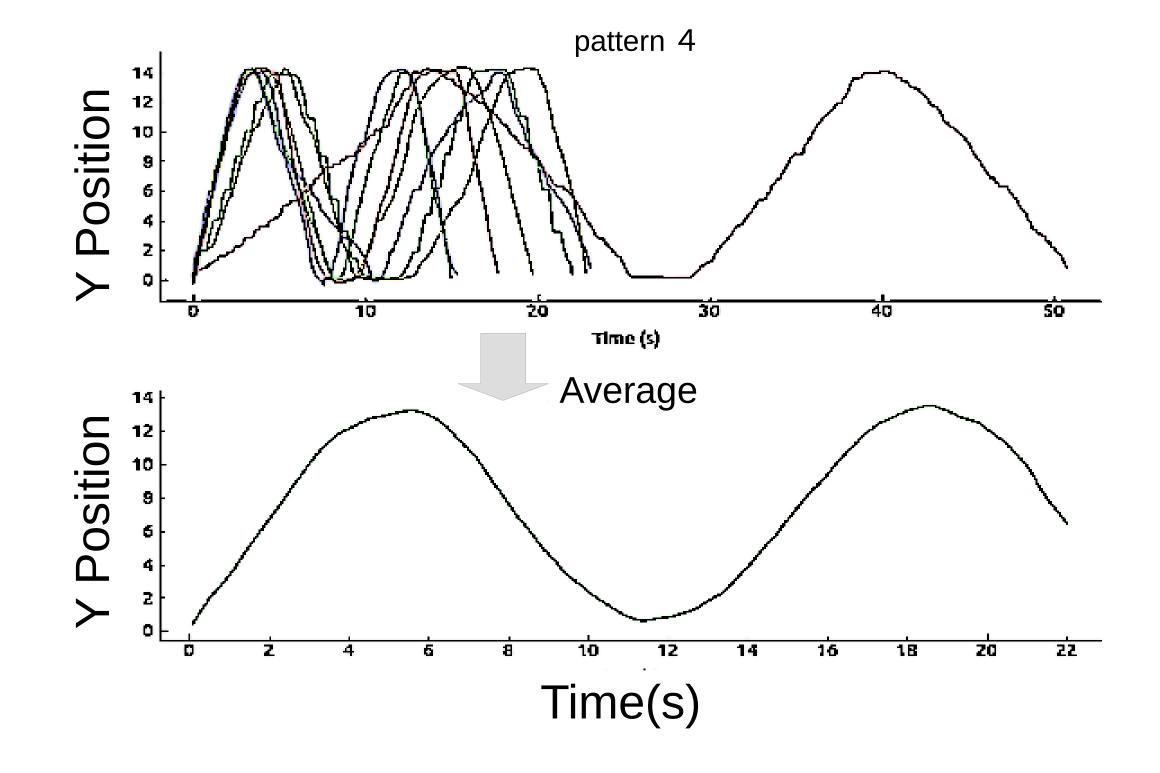
We measured the time and p-value for the task by each pattern.

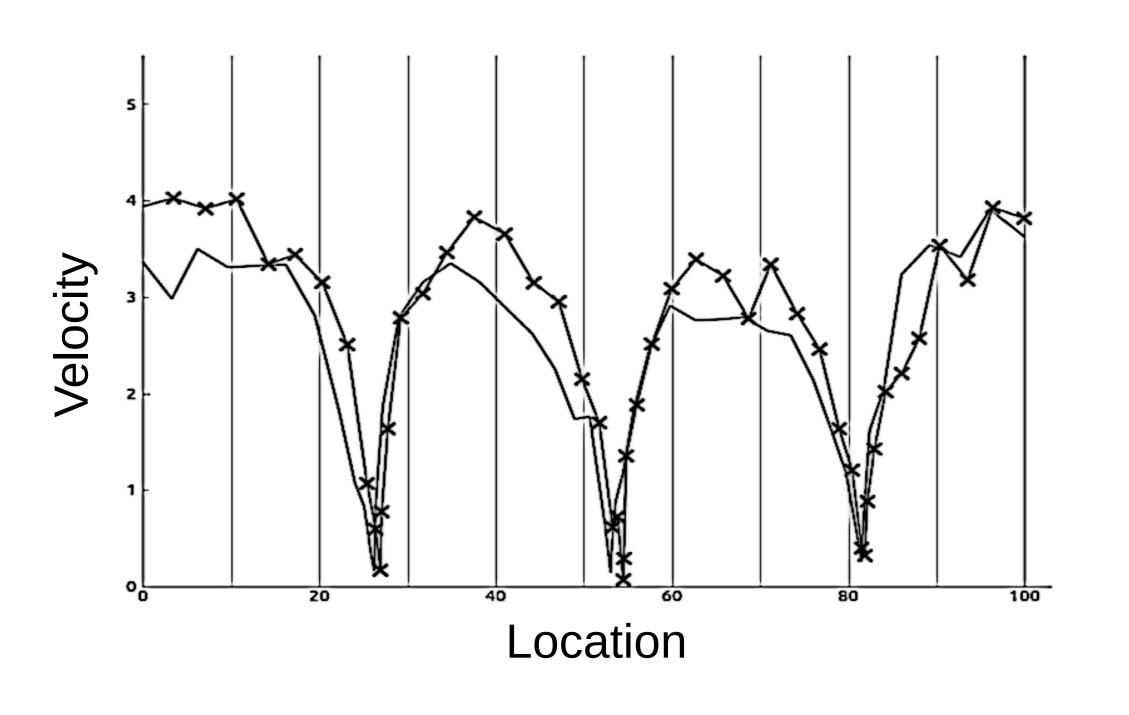
Significant difference was seen between pt.1 and pt.4



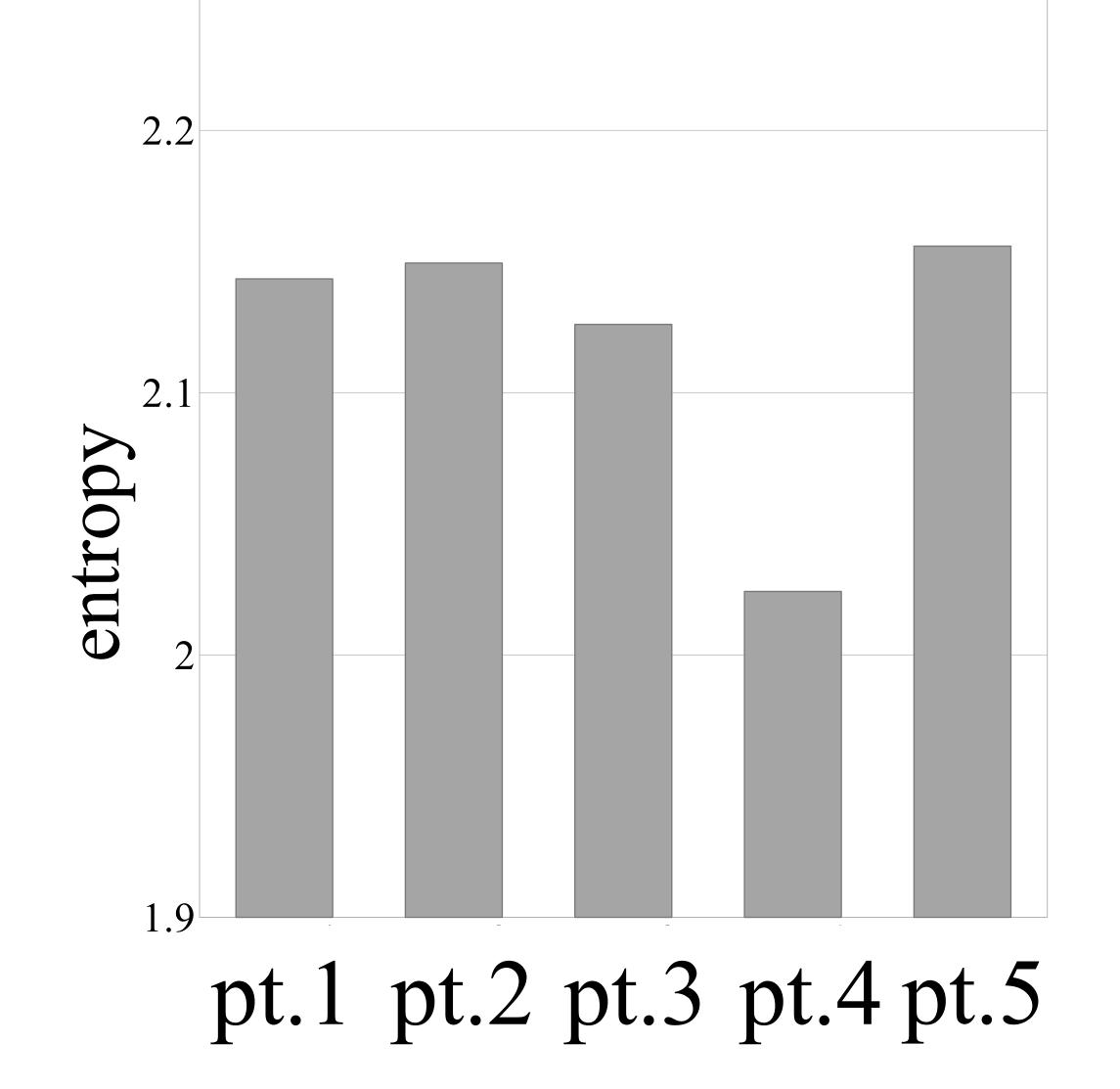
Illusions	Pattern	Velocity	Fluctuation
Non	1	2.34	
Exercise	2	2.38	+1.71%
	3	2.45	+4.70%
Angle	4	2.14	-8.55%
	5	2.16	-7.69%

The movement of the hand became faster by the effect of some optical illusion, and became slower by the "pattern 4" optical illusion.

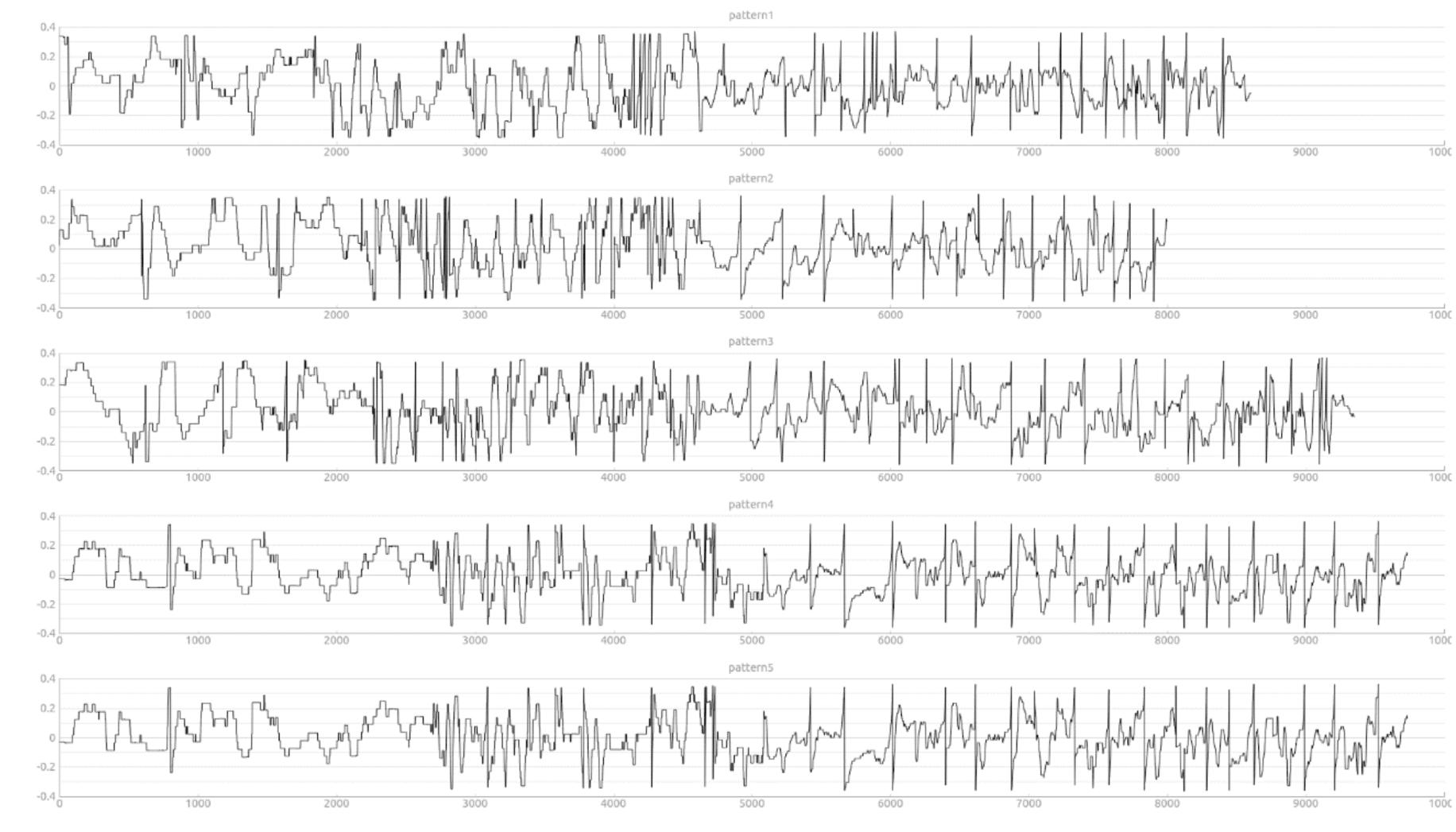




Analysis



We calculated a value of the entropy as the degree of deviation from center of the horizontal component.



A value in pt.4 becomes smaller than others. Therefore we can say that the movement of the subject becomes careful by the influence of a background!