Supplementary Materials for

Mental Imagery Modulates Bistable Perception in a Modality-Specific Manner

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- The symbols , **, and *** indicate statistical significance levels, where $p < 0.05$, $p < 0.01$, and $p < 0.001$.*
- All statistical analyses were conducted using JASP software[1], except for the power analyses, which were conducted with G*Power[2].

Table 1

Descriptive Statistics for First Perception Duration Across Conditions in the Auditory Streams

	Physical Condition – Integrated Prime	Physical Condition – Segregated Prime	Imagery Condition – Integrated Prime	Imagery Condition – Segregated Prime
Valid	68	68	68	68
Missing	0	0	0	0
Median	17390.000	15835.000	19910.000	17480.000
Mean	26636.912	26243.529	31650.735	32730.441
Std. Error of Mean	3389.534	3867.059	4272.258	4682.190
Std. Deviation	27950.816	31888.584	35229.945	38610.325

Shapiro-Wilk	0.731	0.644	0.718	0.702
P-value of Shapiro-Wilk	< .001***	< .001***	< .001***	< .001***
Minimum	110.000	650.000	2750.000	1110.000
Maximum	118970.000	119120.000	119080.000	119150.000

Note. All conditions significantly deviated from a normal distribution (Shapiro–Wilk test, p < .001) which justify using non-parametric analyses in subsequent statistical tests.

Table 2

Descriptive Statistics for First Percepts' Duration Across Conditions in the Binocular Rivalry

	Imagery – Prime-Congruent Percepts	Imagery – Prime-Incongruent Percepts	Physical – Prime-Congruent Percepts	Physical – Prime-Incongruent Percepts
Valid	106	105	102	107

Missing	3	4	7	2
Median	1295.917	1148.667	1102.917	1129.750
Mean	1419.091	1395.435	1369.414	1330.898
Std. Error of Mean	72.567	88.260	114.236	63.279
Std. Deviation	747.122	904.394	1153.724	654.562
Shapiro-Wilk	0.852	0.788	0.639	0.895
P-value of Shapiro-Wilk	< .001***	< .001***	< .001***	< .001***
Minimum	225.000	365.333	28.000	270.000
Maximum	5687.625	5664.000	9998.000	3840.000

Note. All conditions significantly deviated from normality (according to Shapiro-Wilk Test, $p < 0.001$), justifying the use of non-parametric tests in subsequent analyses.

Table 3

Wilcoxon Signed-Rank Test Results for First Perception Duration Across Conditions in the Auditory Streams

Measure 1		Measure 2	W	z	df	p	Rank-Biserial Correlation	SE Rank-Biserial Correlation
Physical Condition – Integrated Prime	-	Physical Condition – Segregated Prime	1255.500	0.728		0.469	0.102	0.140
Imagery Condition – Integrated Prime	-	Imagery Condition – Segregated Prime	1215.000	0.257		0.800	0.036	0.139

Note. As Table 1 shows a significant deviation from normality, Wilcoxon Signed-Rank Test was applied, revealing to insignificant results in both conditions (in case of the Physical Condition, W = 1255.500, Z = 0.728, p = .469, rank-biserial correlation = 0.102 (SE = 0.140), while in Imagery Condition W = 1215.000, Z = 0.257, p = .800, rank-biserial correlation = 0.036 (SE = 0.139).

Table 4

Bayesian Wilcoxon Signed-Rank Test Results for First Perception Duration Across Conditions in Auditory Streams

Measure 1		Measure 2	BF_{10}	W	$\hat{R}$
Physical Condition – Integrated Prime	-	Physical Condition – Segregated Prime	0.158	1255.500	1.000
Imagery Condition – Integrated Prime	-	Imagery Condition – Segregated Prime	0.131	1215.000	1.001

Note.The Bayesian Wilcoxon signed-rank test showed weak evidence supporting the null hypothesis in both conditions (in the physical condition: BF_{10} = 0.158, in the imagery condition: BF_{10} = 0.131. The Gelman–Rubin convergence values ($\hat{R} \approx 1.000$) suggest that the MCMC chains converged properly, so the results are reliable.

Table 5

Wilcoxon Signed-Rank Test for First Perception Duration Across Conditions in the Binocular Rivalry

Measure 1		Measure 2	W	z	df	p	Rank-Biserial Correlation	SE Rank-Biserial Correlation
Imagery – Prime-Congruent Percepts	-	Imagery – Prime-Incongruent Percepts	2966.000	0.947		0.344	0.108	0.113
Physical – Prime-Congruent Percepts	-	Physical – Prime-Incongruent Percepts	2311.500	-0.894		0.372	-0.103	0.114

Note. In this analyses for each participant their prime-directed and non-prime directed first percepts were averaged. As Wilcoxon Signed-Rank Test shows, no significant result was found (in the imagery condition, W = 2966.000, Z = 0.947, p = .344, rank-biserial correlation = 0.108 (SE = 0.113), while in physical condition W = 2311.500, Z = -0.894, p = .372, rank-biserial correlation = -0.103 (SE = 0.114).

Table 6

Chi-Square Analysis for First Percepts

a									
Auditory Streams					Binocular Rivalry				
		First Perception Type					First Perception Type		
Condition		Integrated	Segregated	Total	Condition		Right	Left	Total
Segregated Physical Priming	Count	59	9	68	Left Physical Priming	Count	374	114	488
	%	87 %	13 %	100 %		%	77 %	23 %	100 %

Integrated Physical Priming	Count	61	7	68	Right Physical Priming	Count	315	412	727
	%	90%	10%	100 %		%	43 %	57 %	100 %
Segregated Imagery Priming	Count	59	9	68	Left Imagery Priming	Count	222	264	486
	%	87 %	13 %	100 %		%	46%	54 %	100 %
Integrated Imagery Priming	Count	64	4	68	Right Imagery Priming	Count	433	308	741
	%	94 %	6 %	100 %		%	58 %	42 %	100%

b

	Auditory Streams					Binocular Rivalry				
Condition	Value	df	p	Cramer's V	BF_{10}	Value	df	p	Cramer's V	BF_{10}
Physical Priming X^2	*0.283*	*1*	*0.595*	*0.046*	*0.157*	**137.088**	**1**	**< .001**	**0.335**	**$3.492*10^{28}$**
Imagery Priming X^2	*2.126*	*1*	*0.145*	*0.125*	*0.347*	**19.189**	**1**	**< .001**	**0.125**	**1062.612**

Note. As Table 6 shows, none of the conditions in the Auditory Streamings resulted in significant (in case of the physical prime: $\chi^2(1, N = 136) = 0.283$, $p = .595$, Cramer's $V = 0.046$, $BF_{10} = 0.157$; while in imagery prime: $\chi^2(1, N = 136) = 2.126$, $p = .145$, Cramer's $V = 0.125$, $BF_{10} = 0.347$), which suggest there is no significant effect of each prime. On the other hand, Binocular Rivalry led to significant results in both cases (in physical prime: $\chi^2(1, N = 1215) = 137.088$, $p > .001$, Cramer's $V = 0.335$, $BF_{10} = 3.492*10^{28}$; while in imagery prime $\chi^2(1, N = 1227) = 19.189$, $p > .001$, Cramer's $V = 0.125$, $BF_{10} = 1062.612$) justifying subsequent statistical tests.

Table 7

Spearman's Correlation Between the Visual Subscale of the PSIQ and Prime-Congruent Percepts in the Imagery Condition of the Binocular Rivalry

			Spearman's rho	p	Effect size (Fisher's z)	SE Effect size
Visual Subscale of the PSIQ	-	Imagery – Prime-Congruent Percepts	0.327	< .001***	0.339	0.100

Note. A significant positive association was found between participants' Visual Imagery ability (PSIQ – Visual Subscale) and the proportion of prime-congruent percepts in the imagery condition, Spearman's ρ = .327, p < .001, Fisher's *z = 0.339, SE = 0.100.*

Table 8

Bayesian Kendall's Tau Correlation Between the Visual Subscale of the PSIQ and Prime-Congruent Percepts in the Imagery Condition of the Binocular Rivalry

			Kendall's tau B	BF_{10}
Visual Subscale of the PSIQ	-	Imagery – Prime-Congruent Percepts	0.233	68.312

Note. Bayesian Kendall's tau showed a positive correlation between visual subscale of the PSIQ and prime-congruent perception in the imagery condition of Binocular Rivalry (Kendall's tau B = 0.233, BF_{10} *= 68.31), indicating strong evidence for the alternative hypothesis.*

In the following analyses, we examine the data along quartiles based on the visual subscale of the PSIQ. Q1 indicates low visual imagery ability, while Q4 refers to hyperphantasia (see more details in the results).

Table 9.A.

Test for Equality of Variances (Levene's) for Prime-Congruent Percepts in Imagery Condition of Binocular Rivalry

F	df1	df2	p
3.883	3.000	104.000	0.011**

Participants were grouped based on their PSIQ vision subscale scores into four quartile-based groups. Levene's test showed significant variance differences (F(3, 104) = 3.883, p = 0.011), so Welch's correction was applied in the ANOVA.

Table 9.B.

ANOVA for Prime-Congruent Percepts in Imagery Condition of Binocular Rivalry

Homogeneity Correction	Cases	Sum of Squares	df	Mean Square	F	p	ω²
Welch	quartile	0.595	3.000	0.198	9.081	< .001***	0.108
	Residuals	3.837	56.650	0.068			

Note. ANOVA with Welch homogeneity correction suggest significant group differences (F(3, 56.650) = 9.081, p < .001, with a partial omega squared (ω²) of 0.108), suggesting a moderate effect size.

Table 9.C.

Post Hoc Comparisons for Prime-Congruent Percepts in Imagery Condition of Binocular Rivalry

		Mean Difference	SE	df	t	Cohen's d	p_{tukey}	
q1	q2	-0.183	0.054	104	-3.400	-0.954	0.005	**
	q3	-0.097	0.051	104	-1.887	-0.505	0.240	
	q4	-0.180	0.052	104	-3.469	-0.936	0.004	**

q2	q3	0.086	0.053	104	1.628	0.449	0.368
	q4	0.003	0.053	104	0.065	0.018	1.000
q3	q4	-0.083	0.051	104	-1.627	-0.431	0.368

Note. As Table 9.C. shows, the only significant differences between the groups were suggested between q1 and q2 (the mean difference was -0.183 (SE = 0.054), t(104) = -3.400, Cohen's d = -0.954, p = 0.005), as well as between q1 and q4 (the mean difference was -0.180 (SE = 0.052), t(104) = -3.469, Cohen's d = -0.936, p = 0.004). (P-value adjusted for comparing a family of 4 estimates.)

Table 10.A.
Bayesian Model Comparison Across PSIQ Visual Imagery Quartiles

Models	P(M)	P(M|data)	BF_M	BF_{10}	error %
quartiles	0.500	0.950	18.812	1.000	
Null model	0.500	0.050	0.053	0.053	0.005

Note. As Table 10 shows, Bayesian model comparison supported a strong evidence for the main model over the null model (BF_{10} = 18.81, P = .95, BF_{10} = 18.81, error = 0.5%).

Table 10.B.
Post Hoc Comparisons Across PSIQ Visual Imagery Quartiles

	Prior Odds	Posterior Odds	$BF_{10,\,U}$	error %

q1	q2	0.414	346.595	836.755	1.424×10^{-5}
	q3	0.414	0.430	1.038	0.009
	q4	0.414	35.509	85.726	3.730×10^{-8}
q2	q3	0.414	0.283	0.683	0.008
	q4	0.414	0.116	0.279	0.008
q3	q4	0.414	0.240	0.580	0.009

Note.This table presents post hoc Bayesian t-tests comparing PSIQ visual imagery quartiles. Posterior odds have been adjusted for multiple comparisons by setting the prior probability of the null hypothesis to 0.5 across all tests (Westfall, Johnson, & Utts, 1997). A default Cauchy prior (location = 0, scale = 1/√2) was used. BF_{10} values indicate evidence in favor of the alternative hypothesis; "U" denotes uncorrected Bayes Factors. Error percentages reflect the numerical accuracy of the estimation.

Table 11.A.

Test for Equality of Variances (Levene's) for PSIQ Visual Imagery Quartiles (with Q2 and Q3 Combined)

F	df1	df2	p
3.022	2.000	105.000	0.053

Note. Levene's test for homogeneity of variances was not significant, F(2, 105) = 3.02, p = .053, indicating that no correction was needed for the ANOVA.

Table 11.B.

ANOVA Across PSIQ Visual Imagery Quartiles (with Q2 and Q3 Combined)

Cases	Sum of Squares	df	Mean Square	F	p	ω²
Q1 – (Q2 + Q3) – Q4	0.497	2	0.249	6.637	0.002**	0.095
Residuals	3.935	105	0.037			

Type III Sum of Squares was used. The grouping was based on PSIQ visual imagery quartiles, with Q2 and Q3 combined. The result shows a significant effect across groups, F(2, 105) = 6.64, p = .002, with a medium effect size (ω² = 0.095).

Table 11.C.
Post Hoc Comparisons Across PSIQ Visual Imagery Quartiles (with Q2 and Q3 Combined)

		Mean Difference	SE	df	t	Cohen's d	p_{tukey}	$p_{scheffe}$
q1	q2 + q3	-0.136	0.046	105	-2.971	-0.702	0.010*	0.014*
	q4	-0.180	0.052	105	-3.442	-0.928	0.002**	0.004**
q2 + q3	q4	-0.044	0.045	105	-0.967	-0.226	0.599	0.628

Note. *Tukey's HSD and Scheffé tests revealed significant differences between Q1 and Q2+Q3 (t(105) = -2.97, p = .010/.014, d = -0.70) and between Q1 and Q4 (t(105) = -3.44, p = .002/.004, d = -0.93). No significant difference was found between Q2+Q3 and Q4 (t(105) = -0.97, p = .599/.628, d = -0.23).*

Table 12

Bayesian Model Comparison Based on PSIQ Visual Imagery Quartiles (Q2 and Q3 Combined)

Models	P(M)	P(M|data)	BF_M	BF_{10}	error %
kvart3	0.500	0.940	15.719	1.000	
Null model	0.500	0.060	0.064	0.064	0.013

Note. Bayesian model comparison showed strong evidence in favor of the model based on PSIQ visual imagery quartiles with Q2 and Q3 combined (BF_{10} = 15.72, P(M|data) = .94), compared to the null model (BF_{10} = 0.064, P(M|data) = .06). Estimation error was 1.3%.

Table 13

Bayesian Model Comparison Across PSIQ Visual Imagery Quartiles (Q2 and Q3 Combined)

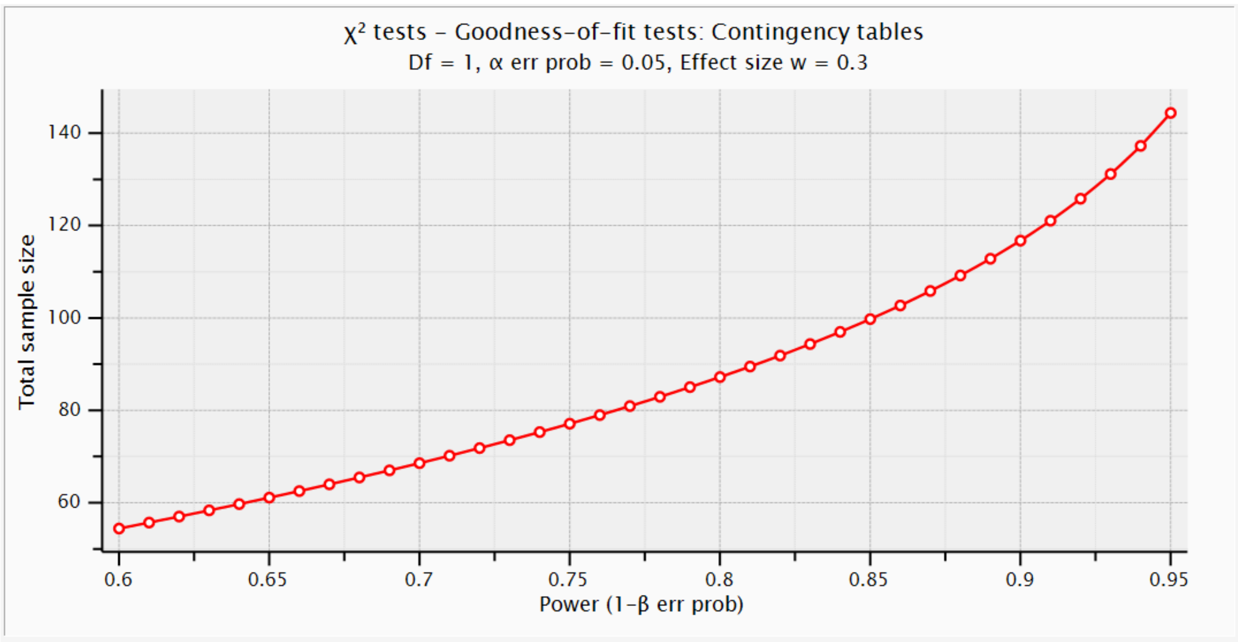
		Prior Odds	Posterior Odds	$BF_{10, U}$	error %
q1	q2 + q3	0.587	6.768	11.522	3.027×10^{-7}
	q4	0.587	50.355	85.726	3.730×10^{-8}
q2 + q3	q4	0.587	0.199	0.339	0.014

Note. The posterior odds have been corrected for multiple testing by fixing to 0.5 the prior probability that the null hypothesis holds across all comparisons (Westfall, Johnson, & Utts, 1997). Individual comparisons are based on the default t-test with a Cauchy (0, r = 1/sqrt(2)) prior. The "U" in the Bayes factor denotes that it is uncorrected.

All of the following power analyses were tested using the G*Power.

Figure 1

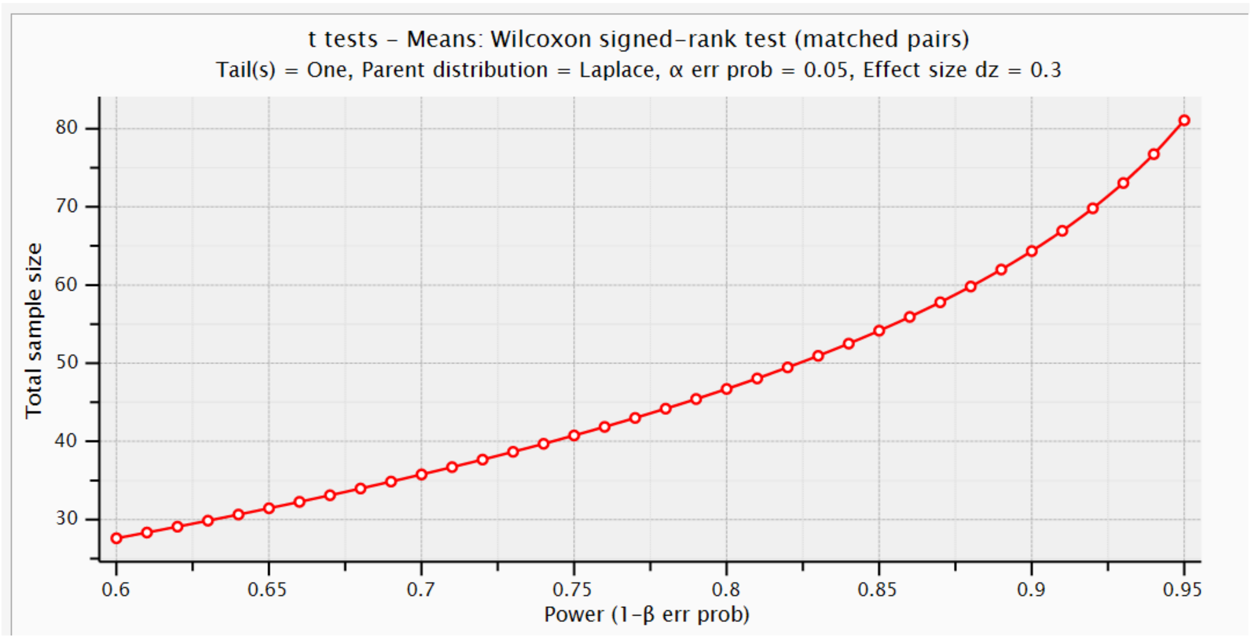
Power analysis for χ^2 tests – Goodness-of-fit (contingency tables)



Note. The graph shows the relationship between statistical power (1 - β error probability) and required total sample size for a χ^2 goodness-of-fit test with 1 degree of freedom, α = 0.05, and effect size w = 0.3. As statistical power increases, the total sample size required increases exponentially, reaching approximately 145 participants at 95% power.

Figure 2

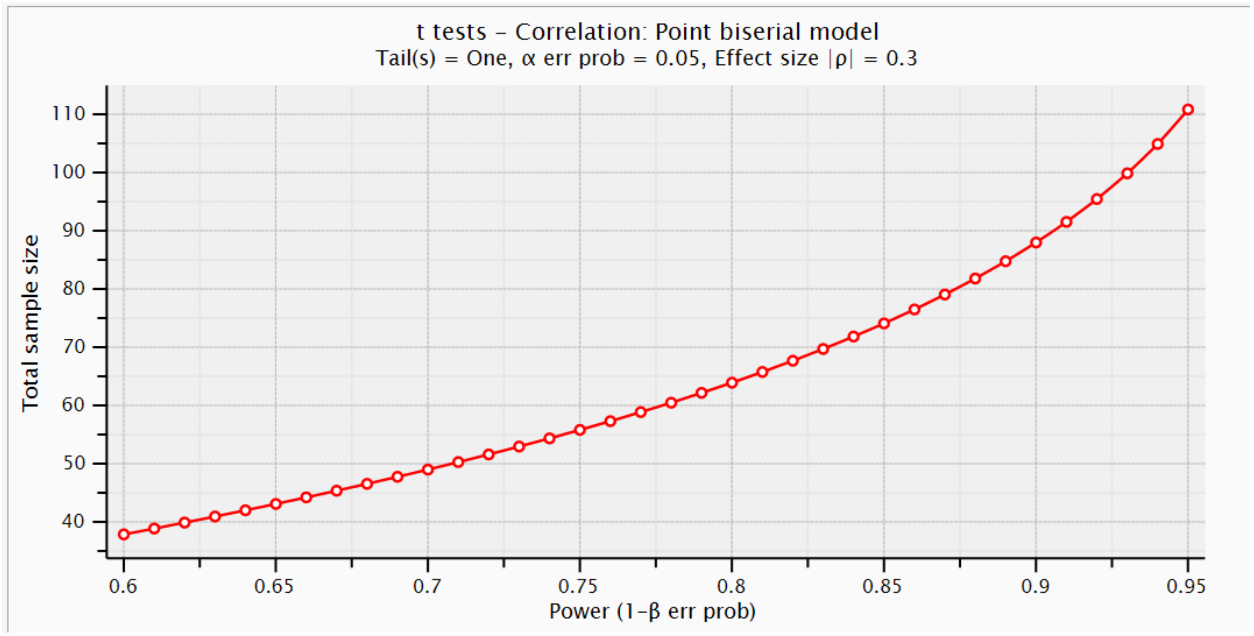
Power analysis for t tests – Wilcoxon signed-rank test (matched pairs)



Note. *The graph displays the required total sample size for the Wilcoxon signed-rank test under a one-tailed hypothesis, Laplace parent distribution, $\alpha = 0.05$, and effect size dz = 0.3. The sample size requirement increases with desired power, but remains notably lower than that of the χ^2 test, reaching about 82 participants at 95% power.*

Figure 3

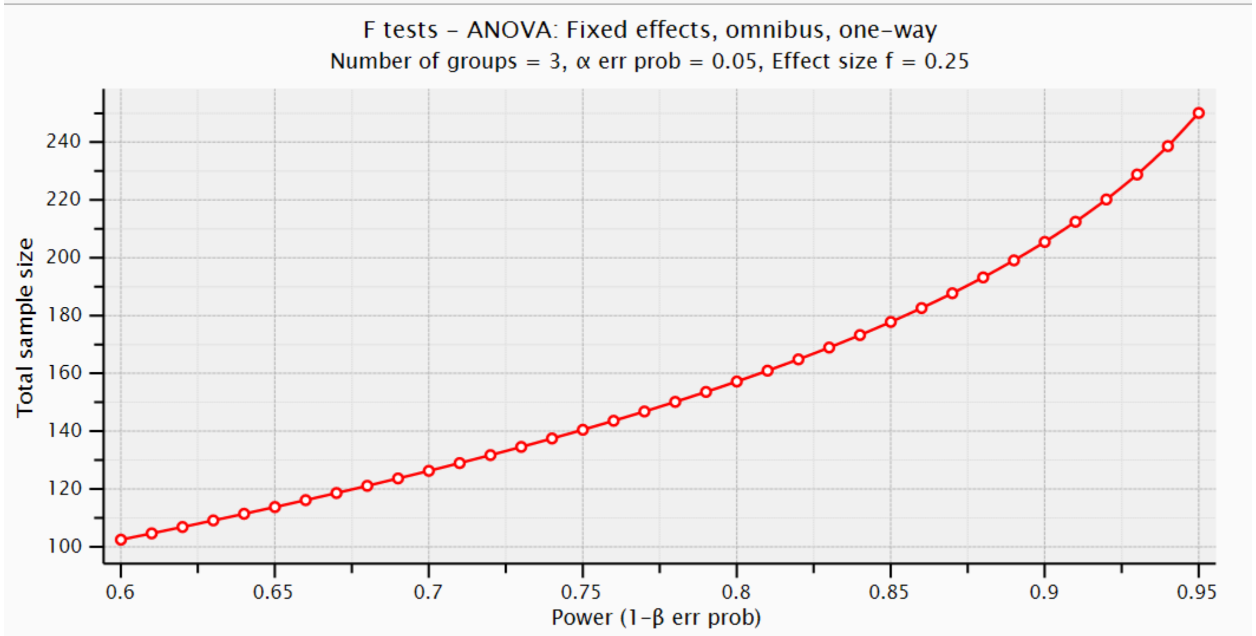
Power analysis for t tests – Correlation (point-biserial model).



Note. The graph shows the required total sample size as a function of statistical power (1 - β) for a one-tailed t-test based on a point-biserial correlation. Parameters: α = 0.05, effect size |ρ| = 0.3. The sample size increases with desired power, ranging from approximately 60 participants (power = 0.7) to around 110 (power = 0.95).

Figure 4

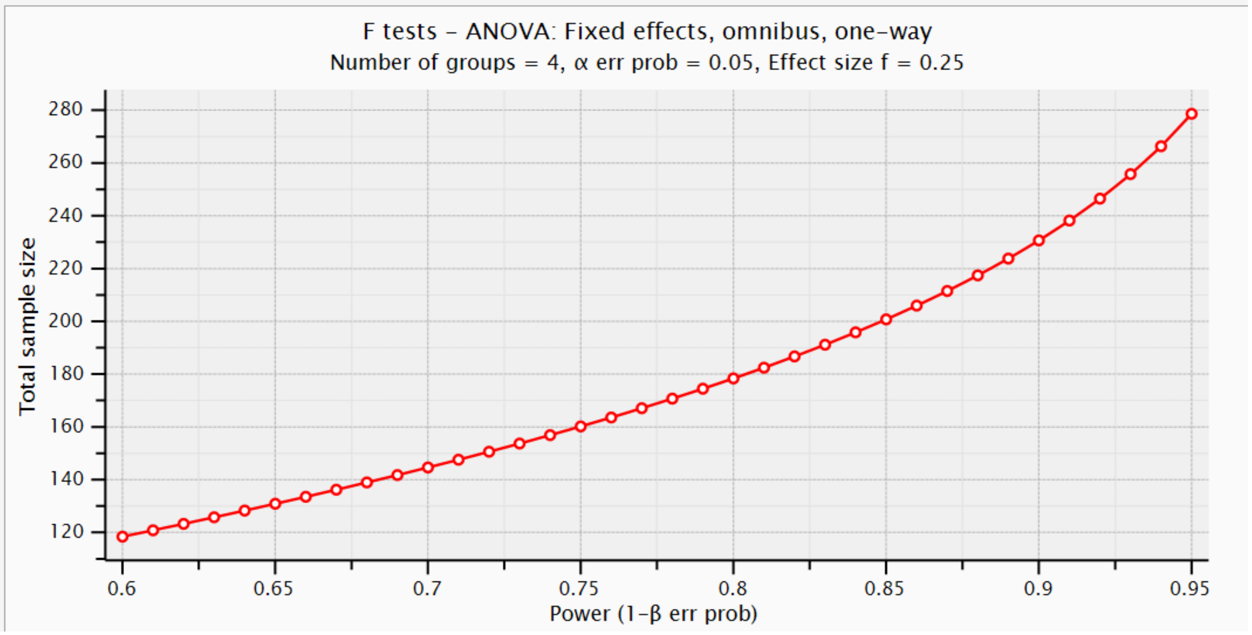
Power analysis for F tests – ANOVA (fixed effects, omnibus, one-way).



Note. The graph displays the relationship between statistical power and total sample size for a one-way ANOVA with 3 groups. Parameters: α = 0.05, effect size f = 0.25. The required sample size rises with increasing power, from about 145 participants (power = 0.7) to roughly 245 (power = 0.95).

Figure 5

Power analysis for F tests – ANOVA (fixed effects, omnibus, one-way) with four groups.



Note. The graph shows the required total sample size as a function of statistical power (1 - β) for a one-way fixed effects ANOVA with 4 groups, α = 0.05, and effect size f = 0.25. As desired power increases, the sample size rises from approximately 125 participants (power = 0.6) to about 275 participants (power = 0.95).

References

[1]JASP Team. (2024). *JASP* (Version 0.19.0) [Computer software]. https://jasp-stats.org/
[2] Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (n.d.). *G*Power (Version 3.1) [Computer software]. Heinrich Heine University Düsseldorf. https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower

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Instructions

Instructions for Binocular Rivalry

The test will consist of 3 blocks, and each lasts about 5 minutes. We always calibrate at the beginning of the blocks, so you can take a break between blocks and move around, but during the experiment after calibration it is important to keep your head still.

Now I'm showing you what you're going to see, it's not part of the test yet.

Short presentation: basic rivalry + 1 imaginary block

Your two eyes both get a different view of the two monitors using the mirrors. The sinus grid moves in opposite directions. You will see the grid go in one direction and the other, and sometimes the two directions will mix. When the lanes are going in one direction, just let your eyes follow the stimulus, like watching trees go by while you're travelling. This eye movement is recorded with the eye movement tracker. Within the block, there are short sections of a few seconds, with a grey screen in between to indicate the end of the section. When this yellow dot appears, you can press enter to start the next section. So you can take a short break at this point as well, just don't move your head. But feel free to blink, you can wait a while. When this grey rectangle appears, you will have a task, which I will tell you before each block.

Now please sit here, and adjust the height to make you comfortable for the next 20 minutes or so.

Imagery Priming

In the first block, after two basic rivalry sections, you will see a grid running in one direction (both eyes will then receive the same stimulus), followed by the grey rectangle in the middle of the screen shown at the beginning. Now, for this block, when you see the grey rectangle, your task is to visualize the stimulus shown earlier (the grid running in one certain direction) onto.

Have you understood the task? Then place your chin here, rest your forehead here, look straight ahead. Before I start the calibration, find the enter with your hand, because you will be able to start the sections with it. I'm starting the calibration now, you'll see a dot, just follow it with your eyes. Okay, thank you. I'll start the test.

The first block is over, now you can move your head if you feel you need to take a break.

Physical Priming

The second block follows. Now all you have to do is follow the tracks with your eyes as if you were looking at the passing trees from a train window. We'll calibrate again. Place your chin here, rest your forehead here, look straight ahead. Before I start the calibration, find the enter with your hand. I'm starting the calibration now, you'll see the dot again, just follow it with your eyes. Okay, thank you. I'll start the test.

The second block is over, now you can move your head if you feel you need to take a break.

The third block follows. After the two basic rivalry sections, you will see a grid running clearly in one direction, followed by the grey rectangle in the middle of the screen that you know from the first block.

Conceptual Priming

For this block, after you have seen the grids going in one direction and you see the grey rectangle, your task is to say the direction that you have seen before to yourself, for example, "right, right, right" or "left, left, left."

Have you understood the task? Then place your head, look straight ahead, find the enter with your hand, and we can start the calibration. Okay, thank you. I'll start the test.

We are ready, thank you for coming!

Instructions for the Auditory Stream Segregation Paradigm

1. Demonstrations

During the experiment, you will hear a sequence of sounds. This sequence can be perceived in different ways – as a combination of different sound streams – and if one listens long enough, their impression may alternate between these interpretations. Your task in the experiment will be to continuously indicate what you perceive.

Now I will present the possible sound patterns so that you will be able to recognize and report what you hear during the experiment. Each of these example sequences emphasizes one of the possible perceptual interpretations to help you identify them more easily.

First, I will play a sequence of sounds that is most likely perceived as a single repeating stream. These sounds are called *integrated* sounds, and the stream often resembles a 'galloping' sound, because all the tones are perceived as one coherent flow. If, during the experiment, you hear this type of stream, please press and hold the left/right button to indicate it.

Can you try to describe in words what you heard? Would you like to hear it again?

Next, you will hear a sound sequence that was designed to be perceived as two separate streams – as if two different sequences, one high-pitched and one low-pitched, were played side by side. This is called a *segregated* sound. We will refer to it as 'parallel or separate sounds' because they don't blend into a single stream. I'll now play three different examples of this kind of stream. If you perceive this during the experiment, please press and hold the right/left button accordingly.

Here is the first example of a segregated stream.

Can you describe in words what you heard? Would you like to hear it again?

In the previous example, you may have noticed that when the high tones are dominant, the low tones fade into the background, and vice versa. Now we'll enhance that effect. In the next sequence, the low tones will be easier to follow, while the high tones will remain more in the background. If you hear this type of stream during the experiment, please also indicate it by pressing and holding the corresponding button.

Can you describe in words what you heard? Would you like to hear it again?

Finally, I will play the actual sequence you will hear during the experiment. Your only task for now is to simply listen to it. This is just to familiarize you with the sequence that will be played multiple times during the experiment.

Can you describe in words what you heard? Would you like to hear it again?

2. Training

In this part, I'll first play the sequence you just heard. This will be immediately followed – without any pause – by several sequences like the ones previously presented, where one perceptual stream was made more prominent. Please try to continuously indicate which sound stream you perceive, using the appropriate button for each stream as previously explained.

If you hear the galloping (integrated) stream, press and hold the left/right button. If you hear the parallel (segregated) streams, press and hold the right/left button. If what you hear switches from one stream to the other, immediately switch to the corresponding button and keep it pressed for as long as you hear that stream.

If at any point you do not perceive any of the known patterns, release both buttons until you recognize one of the previously introduced streams. Then press and hold the button that corresponds to what you hear.

This is not a task with right or wrong answers. We are interested in knowing what *you* hear, and that can differ from person to person. Some people experience rapid switches, while others stay with one interpretation longer. Neither is better or worse. Please don't try to force yourself to hear one stream or another. Simply report what you actually perceive.

At the end of each sequence, you will hear – without a break – some of the emphasized sequences you were introduced to earlier. These are intended to test whether you can quickly and reliably identify the sound streams. This training will be repeated as many times as needed until you can confidently recognize the different sound patterns and know which button to press without thinking.

Are you ready? Then I will start the program. You can initiate the sound sequence yourself by briefly pressing any button once.

FEEDBACK QUESTIONS (AFTER TRAINING)

1. *Can you describe in words what you heard?*
   (If the participant has many "neither" responses, the experimenter should ask what kind of pattern they heard that they couldn't categorize based on the instructions.)

2. *Did you notice the transitions between the main sequence and the emphasized sequences that followed, and between the different types of examples?*

3. *Do you remember whether you held the button continuously while hearing one of the discussed streams?*

4. *Were there any sound sequences that didn't match any of the examples I showed you earlier? If yes, what did they sound like?*
   (If these are truly new alternatives, provide instructions on how to respond.)

5. *Did you recognize the emphasized sequences that were previously presented? Did you remember which button to press for each?*

6. *Were you sure throughout the training which button corresponded to each stream?*

7. *Did you have to think about which button to press for a given sound stream?*
   (If an answer is missing: "Please try to pay attention to whether you hear a galloping/parallel/ascending or descending pattern.")

EXPERIMENT

1. Non-primed Trial (1 x 2 minutes)

We will now begin the experiment. There will be 8 trials in total. Each trial lasts about 2 minutes. You may take a short break after each one.

Your task is to press and hold the button corresponding to the sound stream you perceive, as you did during training. As before, after the main sequence, you will immediately hear some of the emphasized sequences from earlier. These will help us determine whether you remember the sound streams and their corresponding buttons.

As during training, once I start the program and give you a signal, you can initiate the playback by briefly pressing any button.

2. Primed Trials Without Pause (2 x 2 minutes): Segregated and Integrated Priming

In the next two trials, you will first hear 2 short tones. During these, please do not press any buttons yet. After a short pause, the main sequence will begin. Your task will be the same as before: press and hold the button corresponding to your perception.

As before, the emphasized sequences will follow the main sequence without a break. These are included to check whether you still remember the streams and the corresponding buttons.

3. Primed Trials With 2-Second Pause (2 x 2 minutes): Segregated and Integrated Priming

The next two trials will also begin with 2 short tones. Please do not press any buttons during these tones. After a short 2-second pause, the main sequence will start. Your task remains the same: indicate your perception by pressing and holding the corresponding button, just as you did in training.

Again, the emphasized sequences will follow without pause, helping us verify your recognition of the sound streams and the related buttons.

4. Imagination-Primed Trials (2 x 2 minutes): 30s Playback + 30s Imagery Instruction

In the next two trials, the task will be slightly different. For the first 30 seconds after you press a button, the sounds will not play yet. During this time, please try to vividly imagine either the parallel/separate stream or the galloping stream, depending on the instruction.

To help you, we will replay a short version of the sound stream you should imagine. After that, your task is to hold that imagined stream in your mind until the sounds begin. Once the sequence starts, your task is the same as before: press and hold the button that corresponds to what you hear.

On a scale from 1 to 10, where 10 means the imagery was very vivid, how vividly were you able to imagine the separate stream?

5. Non-primed Trial with Switching (1 x 2 minutes)

In this final trial, please try to switch between the sound streams as often as you can. As soon as you manage to perceive a different stream, try to switch back again, and so on.

It is important that the buttons always reflect what you actually hear. The task is not to press the buttons rapidly, but to *try* to change what you perceive as quickly as possible. The buttons simply indicate what you perceive. Different people can switch at different speeds—this is perfectly normal and does not indicate better or worse abilities.

So, try to switch between the streams as frequently as you can, while always reporting what you actually perceive, just as before.

If you're not sure about the task, please let me know now.