

Visualizations of RT and error rates data from

„The dynamic balance between cognitive flexibility and stability: the influence of local changes in reward expectation and global task context on voluntary switch rate”

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The main dependent variable of our experiment was spontaneous VSR in free-choice trials. For completion, additional analyses with reaction times (RT) and error data as dependent measures are also reported in the main text. Here, we present figures and tables to further illustrate these analyses.

1. RTs and error rates in the practice block

Figures correspond to the analyses reported in 2.2.3 in the main text.

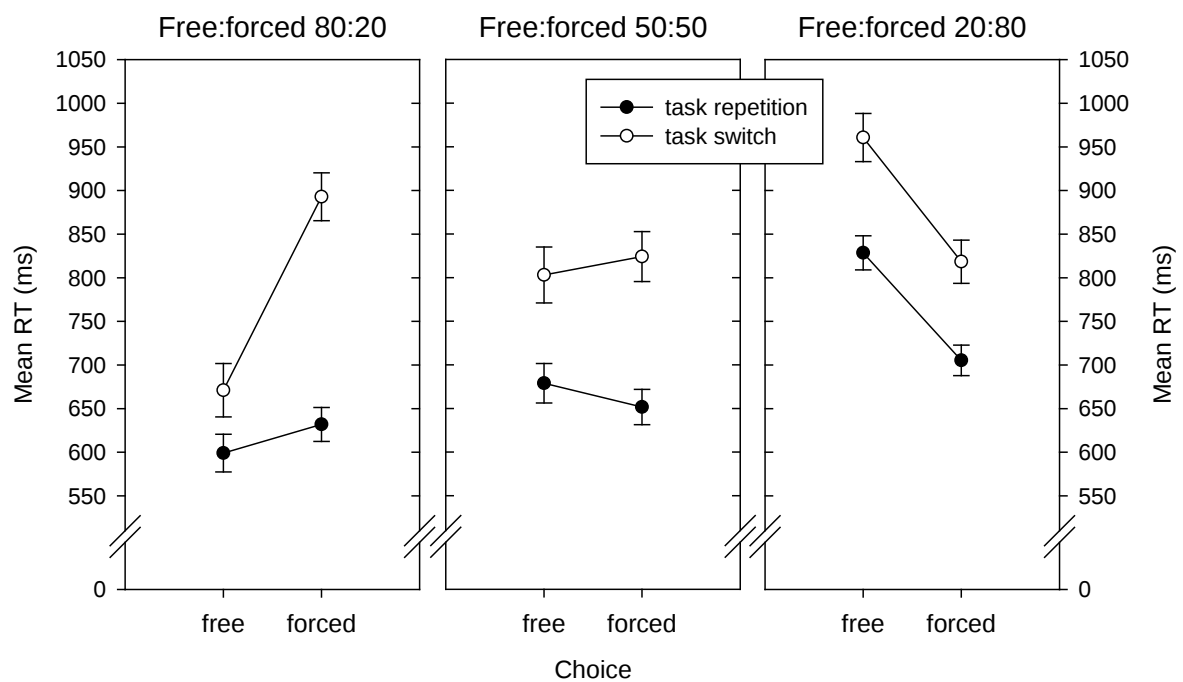


Figure S1 Mean reaction times (in ms) in the extended practice block as a function of Free:forced ratio, Choice, and Transition. Error bars represent ± 1 standard error of the mean.

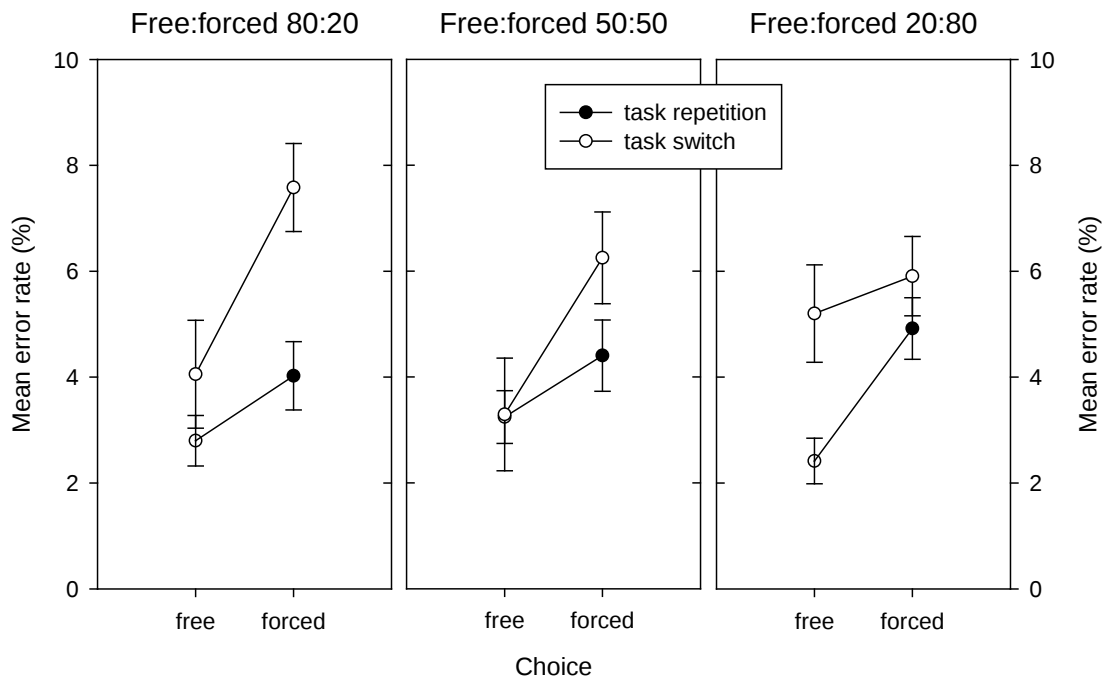


Figure S2 Mean error rates (in %) in the extended practice block as a function of Free:forced ratio, Choice, and Transition. Error bars represent ± 1 standard error of the mean.

2. RTs and error rates in the reward phase

Descriptive statistics for all groups and reward sequences are reported in Table 1 (RTs) and Table 2 (error rates). Graphs corresponding to the analyses reported in the main text in 2.2.5 and 2.2.7 will be provided for significant interactions involving the factor Reward sequence only.

Table 1 Mean RTs in ms (*SE* in parenthesis) as a function of Free:forced ratio, Choice, Transition, and Reward sequence.

		<u>Free:forced ratio</u>											
		80:20				50:50				20:80			
Choice		free		forced		free		forced		free		forced	
Transition		r	s	r	s	r	s	r	s	r	s	r	s
Reward sequence	remain low	529 (12.1)	588 (38.6)	534 (13.0)	818 (23.7)	558 (12.7)	707 (40.3)	555 (13.5)	670 (24.8)	647 (14.0)	721 (32.7)	584 (13.6)	670 (21.8)
	Increase	487 (10.4)	525 (38.6)	483 (10.1)	817 (50.5)	518 (10.9)	569 (16.5)	519 (10.5)	630 (52.7)				
	remain high	486 (10.0)	533 (16.7)	476 (22.5)	759 (18.7)	512 (10.4)	592 (17.4)	533 (23.6)	628 (20.0)	589 (11.3)	679 (19.5)	530 (17.4)	612 (16.4)
	decrease	531 (13.0)	580 (18.5)	525 (15.1)	803 (23.5)	558 (13.6)	608 (19.4)	550 (15.8)	641 (24.6)				

Note: r = task repetition, s = task switch

Table 2 Mean error rates in % (*SE* in parenthesis) as a function of Free:forced ratio, Choice, Transition, and Reward sequence.

		<u>Free:forced ratio</u>											
		80:20				50:50				20:80			
Choice		free		forced		free		forced		free		forced	
Transition		r	s	r	s	r	s	r	s	r	s	r	s
Reward sequence	remain low	5.9 (0.9)	5.6 (1.6)	6.0 (1.2)	15.1 (1.9)	6.3 (0.9)	7.5 (1.6)	9.0 (1.3)	14.1 (2.0)	6.6 (1.0)	10.6 (1.5)	7.9 (1.1)	11.8 (1.5)
	Increase	7.8 (1.0)	8.8 (1.7)	10.2 (1.6)	20.5 (2.3)	7.9 (1.0)	10.3 (1.8)	12.7 (1.7)	15.2 (2.4)				
	remain high	7.7 (0.9)	8.3 (1.7)	9.7 (1.5)	19.9 (2.1)	8.1 (0.9)	9.4 (1.8)	9.5 (1.6)	17.1 (2.2)	7.1 (0.9)	12.8 (1.8)	8.0 (1.2)	12.1 (1.6)
	decrease	5.9 (0.8)	4.9 (1.2)	8.9 (1.4)	14.3 (1.9)	6.8 (0.8)	6.9 (1.3)	8.9 (1.4)	12.7 (2.0)				

Note: r = task repetition, s = task switch

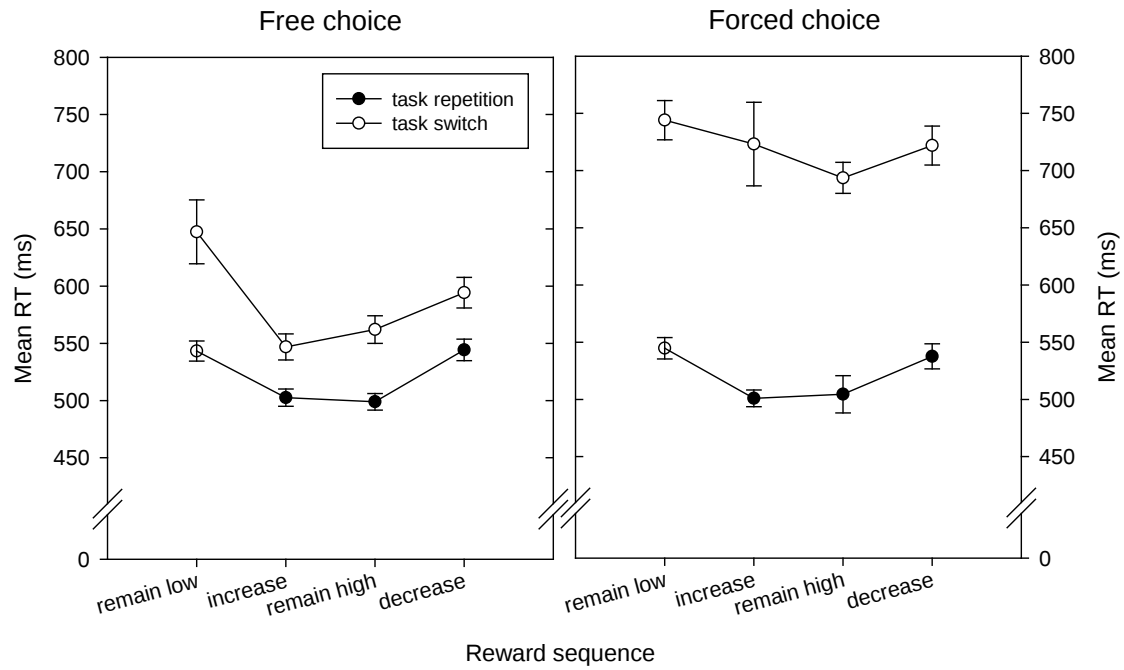


Figure S3 Mean reaction times (in ms) in the reward phase as a function of Choice, Transition, and Reward sequence. Error bars represent +/- 1 standard error of the mean.

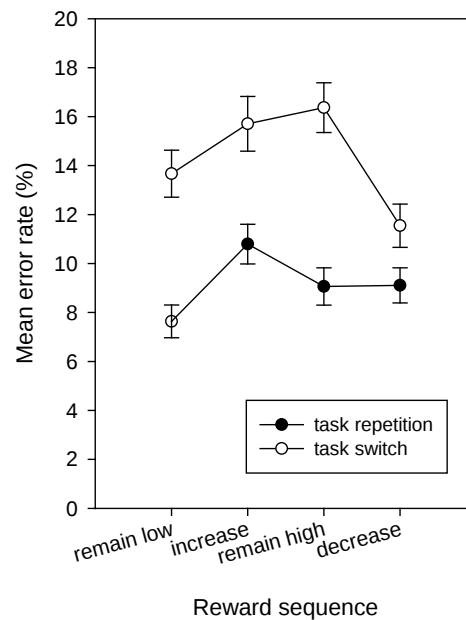


Figure S4 Mean error rates (in %) in forced-choice trials of the reward phase as a function of Transition and Reward sequence. Error bars represent +/- 1 standard error of the mean.