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Supplementary Figures: 15

Supplementary Tables: 0

Supplementary Videos: 0

Reporting Checklist for Nature Neuroscience

This checklist is used to ensure good reporting standards and to improve the reproducibility of published results. For more information, please read Reporting Life Sciences Research.

Please note that in the event of publication, it is mandatory that authors include all relevant methodological and statistical information in the manuscript.

Statistics reporting, by figure

- Please specify the following information for each panel reporting quantitative data, and where each item is reported (section, e.g. Results, & paragraph number).
- Each figure legend should ideally contain an exact sample size (n) for each experimental group/condition, where n is an exact number and not a range, a clear definition of how n is defined (for example x cells from x slices from x animals from x litters, collected over x days), a description of the statistical test used, the results of the tests, any descriptive statistics and clearly defined error bars if applicable.
- For any experiments using custom statistics, please indicate the test used and stats obtained for each experiment.
- Each figure legend should include a statement of how many times the experiment shown was replicated in the lab; the details of sample collection should be sufficiently clear so that the replicability of the experiment is obvious to the reader.
- For experiments reported in the text but not in the figures, please use the paragraph number instead of the figure number.

Note: Mean and standard deviation are not appropriate on small samples, and plotting independent data points is usually more informative. When technical replicates are reported, error and significance measures reflect the experimental variability and not the variability of the biological process; it is misleading not to state this clearly.

		TEST USED		n			DESCRIPTIVE STATS (AVERAGE, VARIANCE)		P VALUE		DEGREES OF FREEDOM & F/t/z/R/ETC VALUE	
	FIGURE NUMBER	WHICH TEST?	SECTION & PARAGRAPH #	EXACT VALUE	DEFINED?	SECTION & PARAGRAPH #	REPORTED?	SECTION & PARAGRAPH #	EXACT VALUE	SECTION & PARAGRAPH #	VALUE	SECTION & PARAGRAPH #
example	1a	one-way ANOVA	Fig. legend	9, 9, 10, 15	mice from at least 3 litters/group	Methods para 8	error bars are mean +/- SEM	Fig. legend	p = 0.044	Fig. legend	F(3, 36) = 2.97	Fig. legend
example	results, para 6	unpaired t-test	Results para 6	15	slices from 10 mice	Results para 6	error bars are mean +/- SEM	Results para 6	p = 0.0006	Results para 6	t(28) = 2.808	Results para 6
+ -												

		TEST USED		n			DESCRIPTIVE STATS (AVERAGE, VARIANCE)		P VALUE		DEGREES OF FREEDOM & F/t/z/R/ETC VALUE	
	FIGURE NUMBER	WHICH TEST?	SECTION & PARAGRAPH #	EXACT VALUE	DEFINED?	SECTION & PARAGRAPH #	REPORTED?	SECTION & PARAGRAPH #	EXACT VALUE	SECTION & PARAGRAPH #	VALUE	SECTION & PARAGRAPH #
+ -	1d	paired t-test	Fig. legend	4	number of animals	Fig. legend	Mean, SEM	Results para1	0.01	Fig. legend	t(3)=5.8	Fig. legend
+ -	3d	binomial test	Fig. legend	15,44,194	number of LE/SZ-avoiding replays and Post-other replays	Fig. legend			LE vs SZ: 4x10^-4 SZ vs Post-other: 1x10^-5	Fig. legend		
+ -	3e	ranksum test	Fig. legend	30(LE) 26(SZ)	number of LE and SZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability:0.0057 mean spike count: 0.004	Fig. legend		
+ -	3f	ranksum test	Fig. legend	30(LE) 26(SZ)	number of LE and SZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability:0.0039 mean spike count: 8x10^-4	Fig. legend		
+ -	4c	unpaired t-test	Fig. legend	107,113,125	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 0.0057 Post-near vs: Post-other:1x10^-6	Fig. legend	t(218)=-2.79, t(236)=4.96	Fig. legend
+ -	4c	ANOVA	Fig. legend	107,113,125	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			1x10^-4	Fig. legend	F(2,342)=9.46	Fig. legend
+ -	4d	binomial test	Fig. legend	107,113,125	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 2x10^-8 Post-near vs: Post-other:0.0037	Fig. legend		
+ -	4e	binomial test	Fig. legend	70,31,57	number of non-pausing replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 8x10^-4 Post-near vs: Post-other:9x10^-6	Fig. legend		
+ -	4f	Two-Way ANOVA	Fig. legend	345(Pre/Day1) 238(Post)	number of replays	Fig. legend	Median, 25% and 75% percentile	on Figure	future vs past: 1x10^-13 Pre/Day1 vs: Post: 6x10^-39	Fig. legend	F(1,1,1163)=56.3,183.58	Fig. legend
+ -	4g	binomial test	Fig. legend	323(Pre/Day1) 180(Post)	number of replays with >10 cm movement 10s before and after replay	Fig. legend			3x10^-19	Fig. legend		
+ -	5a	signrank test	Fig. legend	100 (Day1) 147 (Day2)	number of place cells	Fig. legend	Median, 25% and 75% percentile	on Figure	Day1:0.47 Day2:0.0018	Fig. legend		

+ -	5b	signrank test	Fig. legend	100 (Day1) 147 (Day2)	number of place cells	Fig. legend	Median, 25% and 75% percentile	on Figure	Day1:0.70 Day2: 0.0018	Fig. legend		
+ -	5c	ranksum test	Fig. legend	26(SZ),85 (NSZ)	number of SZ/NSZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	0.005	Fig. legend		
+ -	5d	ranksum test	Fig. legend	26(SZ),85 (NSZ)	number of SZ/NSZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	0.027	Fig. legend		
+ -	5e	signrank test	Fig. legend	1591 (Day1) 2424 (Day2)	number of pairs of place cells	Fig. legend	Median, 25% and 75% percentile	on Figure	0.33 (Day1), 0.017 (Day2)	Fig legend		
+ -	5f	ranksum test	Fig. legend	85(SZ),385(NSZ)	number of vicinity pairs near SZ or not	Fig. legend	Median, 25% and 75% percentile	on Figure	6x10^-7	Fig legend		
+ -	5g	Pearson correlation	Fig. legend	470	number of vicinity pairs	Fig. legend			3.6x10^-9	on Figure		
+ -	6c	ranksum test	Fig legend	133 (theta) 238 (replay)	number of theta sequences and replays	Fig. legend	Median, 25% and 75% percentile	on Figure	4x10^-11	Fig legend		
+ -	6d	binomial test	Fig legend	133 (theta) 238 (replay)	number of theta sequences and replays	Fig. legend			4x10^-15	Fig legend		
+ -	6e	signrank test	Fig legend	26	number of SZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability: 8x10^-6, mean spike count: 8x10^-6	Fig legend		
+ -	7b	ranksum test	Fig legend	216 (Day1) 288 (Day2) 288000 (shuffle)	number of spatial bins	Fig. legend			Day1 vs Day2:6x10^-18 Day2 vs shuffle: 1x10^-133	Fig legend		
+ -	7c	ranksum test	Fig legend	27(Day1) 36 (Day2)	number of spatial bins in SZ	Fig. legend			0.08	Fig legend		
+ -	7d	Levene's test for equality of variances	Fig legend	100 (Day1) 147 (Day2)	number of place cells	Fig. legend			0.07	Fig legend		
+ -	7d	unpaired t-test	Fig legend	100 (Day1) 147 (Day2)	number of place cells	Fig. legend			0.33	Fig legend	t(245)=0.97	Fig legend
+ -	7e	ranksum test	Fig legend	100 (Day1) 147 (Day2)	number of place cells	Fig. legend			2x10^-5	Fig legend		
+ -	7g,h	ranksum test	Fig legend	80(Day1) 106 (Day2)	number of place cells active in two sessions	Fig. legend			0.73 (g),0.97(h)	Fig legend		
+ -	7g,h	Levene's test for equality of variances	Fig legend	80(Day1) 106 (Day2)	number of place cells active in two sessions	Fig. legend			1x10^-4(g) 0.83(h)	Fig legend		
+ -	S1a	paired t-test	Fig legend	4	number of animals	Fig. legend			0.01	Fig. legend	t(3)=5.49	Fig. legend
+ -	S1b	paired t-test	Fig legend	4	number of animals	Fig. legend			0.002	Fig. legend	t(3)=-10.36	Fig. legend
+ -	S3c	Pearson correlation	Fig legend	32	number of spatial bins	on Figure			0.73	Fig. legend		
+ -	S3d	Pearson correlation	Fig legend	32	number of spatial bins	on Figure			2.6x10^-7	Fig. legend		

+ -	S3e	unpaired t-test	Fig legend	9 (vehicle) 9 (NMDA)	number of animals	Fig. legend			0.14	Fig legend	t(16)=-1.57	Fig legend
+ -	S3f	unpaired t-test	Fig legend	9 (vehicle) 9 (NMDA)	number of animals	Fig. legend			3.6x10^-4	Fig legend	t(16)=-4.5	Fig legend
+ -	S4c	unpaired t-test	Fig legend	65	number of LE-avoiding turns	Fig. legend	Mean, SEM	on Figure	0.001	Fig legend	t(128)=3.3	Fig. legend
+ -	S4d	unpaired t-test	Fig. legend	37	number of SZ-avoiding turns	Fig. legend	Mean, SEM	on Figure	0.016	Fig. legend	t(72)=2.47	Fig. legend
+ -	S5c	binomial test	Fig. legend	583	number of replays	Fig. legend			0.46	Fig. legend		
+ -	S7b	binomial test	Fig. legend	113 (Pre/ Day1), 210(Post)	number of replays while animals facing SZ	Fig. legend			3x10^-8	Fig. legend		
+ -	S7c	binomial test	Fig. legend	Dark:83 (Pre/ Day1), 65(Post)Light:30 (Pre/ Day1), 145(Post)	number of replays while animals facing SZ	Fig. legend			2x10^-5(Dark) 0.014(Light)	Fig. legend		
+ -	S8a	signrank test	Fig. legend	26	number of SZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability: 0.0054 mean spike count: 0.0086	Fig. legend		
+ -	S8b	signrank test	Fig. legend	85	number of NSZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability: 0.36 mean spike count: 0.08	Fig. legend		
+ -	S9a	ranksum test	Fig. legend	2209	number of PBEs in Day1 and Day2	Fig. legend	Median, 25% and 75% percentile	on Figure	1.5x10^-23 (activation probability), 5x10^-40 (mean spike count)	Fig. legend		
+ -	S9b	ranksum test	Fig. legend	26(SZ),85 (NSZ)	number of SZ/NSZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	0.80	Fig. legend		
+ -	S9c	ranksum test	Fig. legend	26(SZ),85 (NSZ)	number of SZ/NSZ cells	Fig. legend	Median, 25% and 75% percentile	on Figure	0.97	Fig. legend		
+ -	S9d	ranksum test	Fig. legend	80(SZ),363(NSZ)	number of vicinity pairs near SZ or not	Fig. legend	Median, 25% and 75% percentile	on Figure	1.8x10^-4	Fig. legend		
+ -	S9e	Pearson correlation	Fig. legend	443	number of vicinity pairs	Fig. legend			3.7x10^-7	on Figure		
+ -	S10a	binomial test	Fig. legend	194,273	number of candidate events in Run1 and Run2	Fig. legend			0.11	Fig. legend		
+ -	S10b	binomial test	Fig. legend	226,434	number of candidate events in Pre and Post	Fig. legend			0.09	Fig. legend		
+ -	S10c	Pearson correlation	Fig. legend	10	number of categories of candidate replay events with different mean firing rate	on Figure			0.49	Fig. legend		

+ -	S13	ranksum test	Fig. legend	216 (Run1/ Run2), 195 (others)	number of spatial bins	Fig. legend			Pre/Re-exposure vs Pre/Post: 0.08,Pre/Post vs Post/Re-exposure: 0.009,Post/ Re-exposure vs Run1/ Run2:5x10^-7	Fig. legend		
+ -	S14a	Kolmogorov -Smirnov test	Fig. legend	882	number of PBE in Post	Fig. legend			0.47	Fig. legend		
+ -	S14b	binomial test	Fig. legend	434(Pre), 410(Re-exposure)	number of candidate replay events in Post	Fig. legend			0.68	Fig. legend		
+ -	S14d	binomial test	Fig. legend	15,37,18 2	number of LE/SZ-avoiding replays and Post-other replays	Fig. legend			LE vs SZ: 1x10^-3 SZ vs Post-other: 6x10^-5	Fig. legend		
+ -	S14f	unpaired t-test	Fig. legend	107,100, 119	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 0.014 Post-near vs: Post-other:0.004	Fig. legend	t(205)=-2.47,t(21 7)=2.89	Fig. legend
+ -	S14f	ANOVA	Fig. legend	107,100, 119	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			0.0135	Fig. legend	F(2,323)=4.36	Fig. legend
+ -	S14g	binomial test	Fig. legend	107,100, 119	number of replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 4x10^-8 Post-near vs: Post-other:0.0015	Fig. legend		
+ -	S14h	binomial test	Fig. legend	70,27,57	number of non-pausing replays for Pre/Day1-near, Post-near, Post-other	Fig. legend			Pre/Day1-near vs Post-near: 0.001 Post-near vs: Post-other:8x10^-4	Fig. legend		
+ -	S14i	Two-Way ANOVA	Fig. legend	345(Pre/ Day1) 219(Post)	number of replays	Fig. legend	Median, 25% and 75% percentile	on Figure	future vs past: 4x10^-11 Pre/Day1 vs: Post: 9x10^-41	Fig. legend	F(1,1,1125)=44.6 9,193.78	Fig. legend
+ -	S14j	binomial test	Fig. legend	323(Pre/ Day1) 168(Post)	number of replays with >10 cm movement 10s before and after replay	Fig. legend			1x10^-23	Fig. legend		
+ -	S15b	ranksum test	Fig. legend	165 (theta) 219 (replay)	number of theta sequences and replays	Fig. legend	Median, 25% and 75% percentile	on Figure	1.6x10^-9	Fig. legend		
+ -	S15c	binomial test	Fig. legend	165 (theta) 219 (replay)	number of theta sequences and replays	Fig. legend			2.2x10^-16	Fig. legend		
+ -	S15d	signrank test	Fig. legend	20	number of SZ cells defined by Re-exposure template	Fig. legend	Median, 25% and 75% percentile	on Figure	activation probability: 2.5x10^-4, mean spike count: 3.4x10^-4	Fig. legend		

+ -	Results para 4	ranksum test	Results para4	65 (LE), 37 (SZ)	number of LE/SZ avoiding turns	Results, para3			1x10^-3(PBE), 8x10^-5(replay)	Results, para4		
+ -	Results para 5	Pearson correlation	Results para5	238 (Post), 345 (Pre/ Day1)	number of replays	Results, para5			Post:2x10^-19 Pre/Day1: 1x10^-93	Results, para5		
+ -	Results para 11	signrank test	Results para11	147	number of place cells	Results para11	Median, 25% and 75% percentile	Results para10	7x10^-23	Results para11		
+ -	Results para 11	ranksum test	Results para11	26(SZ),85 (NSZ)	number of SZ/NSZ cells	Results para11	Median, 25% and 75% percentile	Results para10	7x10^-9	Results para11		
+ -	Results para 13	binomial test	Results para13	147,100	number of place cells on Day2/Day1	Results para13			5x10^-4	Results para13		
+ -	Results para 13	binomial test	Results para13	147,100	number of place cells on Day2/Day1	Results para13			0,18,0.68	Results para13		
+ -	Results para 13	binomial test	Results para13	106,80	number of active place cells in both track sessions on Day2/Day1	Results para13			0.037	Results para13		

Representative figures

1. Are any representative images shown (including Western blots and immunohistochemistry/staining) in the paper?

   If so, what figure(s)?

Fig. 1b shows the behavior of one animal, the behavior of all animals are shown in Supp.Fig 6.
Fig. 2 shows an example of SZ-avoiding turn from every rat. The data of all SZ-avoiding turns of all animals are shown in Fig. 3.
Fig 4a shows a few examples of replays. All replays are shown in Supp.Fig.6
Fig. 6a shows two examples of theta sequences. All theta sequences are shown in Supp.Fig.11.
Fig. 7a shows the place fields in one animal. The place fields of all other animals are shown in Supp.Fig.12.
Supp. Fig.3 shows histology of an animal of each group.

2. For each representative image, is there a clear statement of how many times this experiment was successfully repeated and a discussion of any limitations in repeatability?

   If so, where is this reported (section, paragraph #)?

Yes, the description of group data results are stated immediately following the representative figures in the manuscript.

Statistics and general methods

1. Is there a justification of the sample size?

   If so, how was it justified?

   Where (section, paragraph #)?

   Even if no sample size calculation was performed, authors should report why the sample size is adequate to measure their effect size.

Yes, Statistical Analysis section in Methods. We studied 4 rats in this study. This number of rats is similar to many other studies that examine replay or theta sequences. The conclusions we made are based on the analysis of data from each rat and the reproducibility of the results across all the 4 rats.

2. Are statistical tests justified as appropriate for every figure? Where (section, paragraph #)?	The justification of statistical methods was described in Statistical Analysis in Methods.
a. If there is a section summarizing the statistical methods in the methods, is the statistical test for each experiment clearly defined?	Yes. All statistical methods were clearly defined in Figure legends.
b. Do the data meet the assumptions of the specific statistical test you chose (e.g. normality for a parametric test)? Where is this described (section, paragraph #)?	Yes, we used Wilcoxon rank sum test and signed rank test for data that did not meet the assumption of normality. Statistical Analysis section in Methods.
c. Is there any estimate of variance within each group of data? Is the variance similar between groups that are being statistically compared? Where is this described (section, paragraph #)?	NA
d. Are tests specified as one- or two-sided?	All tests are two-sided.
e. Are there adjustments for multiple comparisons?	Yes, we used Bonferroni correction to adjust for mulitple comparison.
3. To promote transparency, *Nature Neuroscience* has stopped allowing bar graphs to report statistics in the papers it publishes. If you have bar graphs in your paper, please make sure to switch them to dot-plots (with central and dispersion statistics displayed) or to box-and-whisker plots to show data distributions.	There are no bar graphs in the paper.
4. Are criteria for excluding data points reported? Was this criterion established prior to data collection? Where is this described (section, paragraph #)?	We did not exclude any data points.
5. Define the method of randomization used to assign subjects (or samples) to the experimental groups and to collect and process data. If no randomization was used, state so. Where does this appear (section, paragraph #)?	For NMDA lesion experiment, the animals were randomly assigned to control or lesion group. Methods- paragraph 21.
6. Is a statement of the extent to which investigator knew the group allocation during the experiment and in assessing outcome included? If no blinding was done, state so. Where (section, paragraph #)?	For NMDA lesion experiment, the experimenter were blind to group allocation during the behavioral experiments and data analysis. Methods- paragraph 22.
7. For experiments in live vertebrates, is a statement of compliance with ethical guidelines/regulations included? Where (section, paragraph #)?	Yes, in Methods paragrah 1.

8. Is the species of the animals used reported?

   Where (section, paragraph #)?

   Yes, in Methods paragrah 1.

9. Is the strain of the animals (including background strains of KO/ transgenic animals used) reported?

   Where (section, paragraph #)?

   NA

10. Is the sex of the animals/subjects used reported?

    Where (section, paragraph #)?

    Yes, in Methods paragrah 1.

11. Is the age of the animals/subjects reported?

    Where (section, paragraph #)?

    Yes, in Methods paragrah 1. Adults rats (400-500 g).

12. For animals housed in a vivarium, is the light/dark cycle reported?

    Where (section, paragraph #)?

    Yes, in Methods paragraph 1.

13. For animals housed in a vivarium, is the housing group (i.e. number of animals per cage) reported?

    Where (section, paragraph #)?

    Yes, in Methods paragraph 1.

14. For behavioral experiments, is the time of day reported (e.g. light or dark cycle)?

    Where (section, paragraph #)?

    Yes, in Methods paragraph 1.

15. Is the previous history of the animals/subjects (e.g. prior drug administration, surgery, behavioral testing) reported?

    Where (section, paragraph #)?

    NA

    a. If multiple behavioral tests were conducted in the same group of animals, is this reported?

       Where (section, paragraph #)?

       NA

16. If any animals/subjects were excluded from analysis, is this reported?

    Where (section, paragraph #)?

    NA

    a. How were the criteria for exclusion defined?

       Where is this described (section, paragraph #)?

       NA

    b. Specify reasons for any discrepancy between the number of animals at the beginning and end of the study.

       Where is this described (section, paragraph #)?

       NA

Reagents

1. Have antibodies been validated for use in the system under study (assay and species)?

   NA

   a. Is antibody catalog number given?

      Where does this appear (section, paragraph #)?

      NA

   b. Where were the validation data reported (citation, supplementary information, Antibodypedia)?

      Where does this appear (section, paragraph #)?

      NA

2. Cell line identity

   a. Are any cell lines used in this paper listed in the database of commonly misidentified cell lines maintained by ICLAC and NCBI Biosample?

      Where (section, paragraph #)?

      NA

   b. If yes, include in the Methods section a scientific justification of their use--indicate here in which section and paragraph the justification can be found.

      NA

   c. For each cell line, include in the Methods section a statement that specifies:
      - the source of the cell lines
      - have the cell lines been authenticated? If so, by which method?
      - have the cell lines been tested for mycoplasma contamination?

      Where (section, paragraph #)?

      NA

Data availability

Provide a Data availability statement in the Methods section under "Data availability", which should include, where applicable:

- Accession codes for deposited data
- Other unique identifiers (such as DOIs and hyperlinks for any other datasets)
- At a minimum, a statement confirming that all relevant data are available from the authors
- Formal citations of datasets that are assigned DOIs
- A statement regarding data available in the manuscript as source data
- A statement regarding data available with restrictions

See our data availability and data citations policy page for more information.

Data deposition in a public repository is mandatory for:

a. Protein, DNA and RNA sequences
b. Macromolecular structures
c. Crystallographic data for small molecules
d. Microarray data

Deposition is strongly recommended for many other datasets for which structured public repositories exist; more details on our data policy are available here. We encourage the provision of other source data in supplementary information or in unstructured repositories such as Figshare and Dryad.

We encourage publication of Data Descriptors (see Scientific Data) to maximize data reuse.

Where is the Data Availability statement provided (section, paragraph #)?

The data can be made available upon request.

Computer code/software

Any custom algorithm/software that is central to the methods must be supplied by the authors in a usable and readable form for readers at the time of publication. However, referees may ask for this information at any time during the review process.

1. Identify all custom software or scripts that were required to conduct the study and where in the procedures each was used.

We usded MATLAB for all data analysis. The procedures were described in Methods in detail.

2. If computer code was used to generate results that are central to the paper's conclusions, include a statement in the Methods section under "**Code availability**" to indicate whether and how the code can be accessed. Include version information as necessary and any restrictions on availability.

MATLAB code can be provided upon request.

Human subjects

1. Which IRB approved the protocol?

   Where is this stated (section, paragraph #)?

   NA

2. Is demographic information on all subjects provided?

   Where (section, paragraph #)?

   NA

3. Is the number of human subjects, their age and sex clearly defined?

   Where (section, paragraph #)?

   NA

4. Are the inclusion and exclusion criteria (if any) clearly specified?

   Where (section, paragraph #)?

   NA

5. How well were the groups matched?

   Where is this information described (section, paragraph #)?

   NA

6. Is a statement included confirming that informed consent was obtained from all subjects?

   Where (section, paragraph #)?

   NA

7. For publication of patient photos, is a statement included confirming that consent to publish was obtained?

   Where (section, paragraph #)?

   NA

fMRI studies

For papers reporting functional imaging (fMRI) results please ensure that these minimal reporting guidelines are met and that all this information is clearly provided in the methods:

1. Were any subjects scanned but then rejected for the analysis after the data was collected?

   NA

   a. If yes, is the number rejected and reasons for rejection described?

      Where (section, paragraph #)?

      NA

2. Is the number of blocks, trials or experimental units per session and/or subjects specified?

   Where (section, paragraph #)?

   NA

3. Is the length of each trial and interval between trials specified?

   NA

4. Is a blocked, event-related, or mixed design being used? If applicable, please specify the block length or how the event-related or mixed design was optimized.

   NA

5. Is the task design clearly described? Where (section, paragraph #)?	NA
6. How was behavioral performance measured?	NA
7. Is an ANOVA or factorial design being used?	NA
8. For data acquisition, is a whole brain scan used? If not, state area of acquisition.	NA
a. How was this region determined?	NA
9. Is the field strength (in Tesla) of the MRI system stated?	NA
a. Is the pulse sequence type (gradient/spin echo, EPI/spiral) stated?	NA
b. Are the field-of-view, matrix size, slice thickness, and TE/TR/ flip angle clearly stated?	NA
10. Are the software and specific parameters (model/functions, smoothing kernel size if applicable, etc.) used for data processing and pre-processing clearly stated?	NA
11. Is the coordinate space for the anatomical/functional imaging data clearly defined as subject/native space or standardized stereotaxic space, e.g., original Talairach, MNI305, ICBM152, etc? Where (section, paragraph #)?	NA
12. If there was data normalization/standardization to a specific space template, are the type of transformation (linear vs. nonlinear) used and image types being transformed clearly described? Where (section, paragraph #)?	NA
13. How were anatomical locations determined, e.g., via an automated labeling algorithm (AAL), standardized coordinate database (Talairach daemon), probabilistic atlases, etc.?	NA
14. Were any additional regressors (behavioral covariates, motion etc) used?	NA
15. Is the contrast construction clearly defined?	NA
16. Is a mixed/random effects or fixed inference used?	NA
a. If fixed effects inference used, is this justified?	NA
17. Were repeated measures used (multiple measurements per subject)?	NA

a. If so, are the method to account for within subject correlation and the assumptions made about variance clearly stated? — NA

18. If the threshold used for inference and visualization in figures varies, is this clearly stated? — NA

19. Are statistical inferences corrected for multiple comparisons? — NA

a. If not, is this labeled as uncorrected? — NA

20. Are the results based on an ROI (region of interest) analysis? — NA

a. If so, is the rationale clearly described? — NA

b. How were the ROI's defined (functional vs anatomical localization)? — NA

21. Is there correction for multiple comparisons within each voxel? — NA

22. For cluster-wise significance, is the cluster-defining threshold and the corrected significance level defined? — NA

Additional comments

Additional Comments — NA