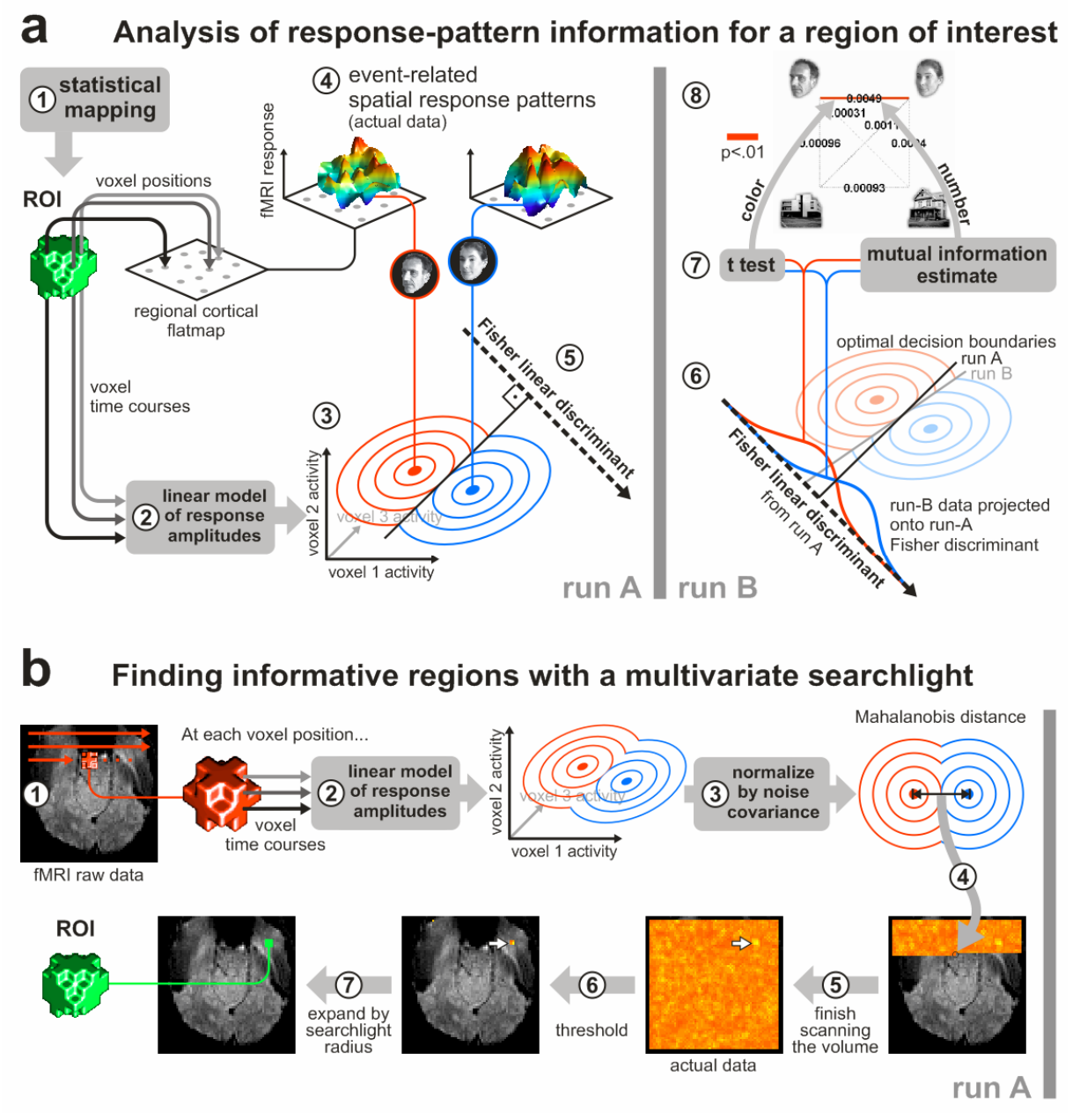
a
Analysis of response-pattern information for a region of interest
1 statistical mapping
ROI
voxel positions
regional cortical flatmap
voxel time courses
2 linear model of response amplitudes
4 event-related spatial response patterns (actual data)
fMRI response
3
voxel 2 activity
voxel 3 activity
voxel 1 activity
5
Fisher linear discriminant
run A
run B
8
p<.01
color
number
0.0049
.00031
0.001
0.00096
0.00093
7 t test
mutual information estimate
6
optimal decision boundaries
run A
run B
Fisher linear discriminant from run A
run-B data projected onto run-A Fisher discriminant
b
Finding informative regions with a multivariate searchlight
1
fMRI raw data
At each voxel position...
voxel time courses
2 linear model of response amplitudes
voxel 2 activity
voxel 3 activity
voxel 1 activity
3 normalize by noise covariance
Mahalanobis distance
4
5 finish scanning the volume
actual data
6 threshold
7 expand by searchlight radius
ROI
run A