Appendix 1

SyN ANTs:

-d 3

-f templateImage

-m participantImage

-o conditionLabel

-t s

-r 4

-s 26

-g 0.1

-p d

-j 0

-y 0

-z 1

DARTEL Toolbox:

Segmentation Step:

 Data

 Volumes: participantImages

 Bias regularisation: no regularisation

 Bias FWHM: No correction

 Save Bias Corrected: Save Nothing

 Tissue

 Tissue probability map: TPM.nii, 1

 Num. Gaussians: 1

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Tissue probability map: TPM.nii, 2

 Num. Gaussians: 1

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Tissue probability map: TPM.nii, 3

 Num. Gaussians: 2

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Tissue probability map: TPM.nii, 4

 Num. Gaussians: 3

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Tissue probability map: TPM.nii, 5

 Num. Gaussians: 4

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Tissue probability map: TPM.nii, 6

 Num. Gaussians: 2

 Native Tissue: Native + Dartel Imported

 Warped Tissue: None

 Warping & MRF

 MRF Parameter: 1

 Clean Up: Light Clean

 Warping Regularisation: 1x5 double

 Affine Regularisation: ICBM space template – European brains

 Smoothness: 0

 Sampling distance: 3

 Deformation Fields: None

Run Dartel (create Template)

 Images: participantImages

 Settings

 Template basename: Template

 Regularisation Form: Linear Elastic Energy

 Outer iterations

 Inner Iterations: 3

 Reg params: [4 2 1e-06]

 Time Steps: 1

 Smoothing Parameter: 16

 Inner Iterations: 3

 Reg params: [2 1 1e-06]

 Time Steps: 1

 Smoothing Parameter: 8

 Inner Iterations: 3

 Reg params: [1 0.5 1e-06]

 Time Steps: 2

 Smoothing Parameter: 4

 Inner Iterations: 3

 Reg params: [0.5 0.25 1e-06]

 Time Steps: 4

 Smoothing Parameter: 2

 Inner Iterations: 3

 Reg params: [0.25 0.125 1e-06]

 Time Steps: 16

 Smoothing Parameter: 1

 Inner Iterations: 3

 Reg params: [0.25 0.125 1e-06]

 Time Steps: 64

 Smoothing Parameter: 0.5

 Optimisation Settings

 LM Regularisation: 0.01

 Cycles: 3

 Iterations: 3

Normalize to MNI Space

 Dartel Template: templateImage

 Voxel sizes: [1 1 1]

 Bounding box: 2x3 double

 Preserve: Preserve Amount

 Gaussian FWHM: [8 8 8]

DRAAMS:

 -S participantImage

 -T templateImage

 -O outputRegisteredImage

 -D outputDeformationField

FLIRT

 -in participantImage

 -ref templateImage

 -out outputImage

 -omat outputMatrix

 -cost corratio

 -searchcost corratio

 -anglerep euler

 -interp trilinear

 -sincwidth 7

 -bins 256

 -dof 12

 -searchrx -90 90 FLIRT2 uses -10 10

 -searchry -90 90 FLIRT2 uses -10 10

 -searchrz -90 90 FLIRT2 uses -10 10

 -coarsesearch 60

 -finesearch 18

FNIRT

 -ref templateImage

 -in participantImage

 -aff affineTransformation

 -iout outputImage

 -fout outputField

 -cout outputFiledCoefficients

 -applyrefmask 1

 -applyinmask 1

 -imprefm 1

 -impinm 1

-imprefval 0

-impinval 0

-miter 5,5,5,5

 -subsamp 4,2,1,1

 -warpres 10,10,10

 -splineorder 3

 -infwhm 6,4,2,2

 -reffwhm 4,2,0,0

 -regmod bending\_energy

 -ssqlambda 1

 -jacrange 0.01, 100.0

 -refderiv 0

 -intorder 5

 -biasres 50,50,50

 -biaslambda 10000

 -estint 1

 -numprec double

 -interp linear